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VOLUME 14

NUMBER 3

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# ARCHAEOLOGY

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## CONTENTS FOR AUTUMN 1961

Two Shaman Graves in Central America	154	WOLFGANG HABERLAND
Apollonia: City of Statues	161	ARTHUR KAHN
Soviet Archaeological Expeditions in 1961	166	DMITRY SHELOV and NIKOLAI MERPERT
Three Campaigns at Biblical Shechem	171	JAMES F. ROSS and LAWRENCE E. TOOMBS
The Frieze of the House of Meleager at Pompeii	180	HALSTED B. VANDERPOEL
The Roman Walls of Barcelona	188	ARNOLD H. WEISS
Recent Discoveries in Northern Panama	198	RUSSELL H. MITCHELL
Ephesus: Past, Present and Future of an Ancient Metropolis	205	ALFONS WOTSCHITZKY
Archaeological News	213	
Reviews of Recent Books	219	
Brief Notices (Books)	227	

ARCHAEOLOGY is indexed in the ART INDEX

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1. The first view on approaching Moyogalpa, showing the the landing jutting out into the waters of Lake Nicaragua, which is famous as the only place having sharks adapted to fresh water. At first the land rises only slightly, and here the main archaeological sites are concentrated, often near the water, which obviously provided much food for the Indians, as attested by numerous net sinkers found at the sites. Farther inland the terrain rises abruptly to the volcano Concepción, here covered by clouds.

# Two Shaman Graves In Central America

By Wolfgang Haberland

Chief, Department of American Archaeology, Hamburg Museum of Ethnology

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EVERY YEAR hundreds of excavations take place in all parts of the world, each adding pieces to the large mosaic which is the cultural development of the human race. Gradually larger parts of the unwritten history of mankind emerge, telling of unnamed nations and tribes, of their struggles, victories and conquests, of migrations and the building of cities, of inventions and arts. All this can be interpreted from careful excavations and the objects obtained from them. But it is the history of political or cultural entities which is uncovered, while the basic factor, the human being himself, often remains anonymous. Anyone will answer that every year hundreds or thousands of graves are excavated which show us the actual individuals through whom these institutions lived, together with such objects as have not perished. However, in most cases the contents of the graves are interpreted only as they bear on the culture to which they belong. The personality of the man or woman who died is generally irreparably lost. What do we know about him when we are excavating his grave, about his tastes, his social standing, his family life, even such a seemingly fundamental question as his occupation? Indeed, there are graves of kings or chieftains, but these, too, are often thus designated only because the graves are especially rich, and they might equally well have belonged to a wealthy man who had nothing to do with political leadership—a merchant, for instance.

In considering a primitive society we may assume that all its members were farmers, who manufactured their own goods when needed, but even here, and certainly to a greater extent as the society developed, the trades and crafts gradually split off and specialists appeared. This development should be reflected in the graves, and in those fortunate enough to meet with suitable conditions (for instance in Peru) it is sometimes reflected. But for the most part only the non-perishable material is preserved and this rarely gives clues as to the occupation of the owner. Why, for instance, did only one out of eight graves at San Miguel del Joco (near La Concepción, Chiriquí Province, Panama) contain arrowheads, and why did this one contain twenty of them? Was the dead man a famous warrior, an excellent hunter? Are the other graves those of women? If this last is true, what were the differences in the grave goods of males and females? Perhaps there were none, since if those arrowheads are taken away the graves are the same. Why are whistles found in some graves and not in others? Were those individuals fond of music? One can see how difficult it is to appraise the person and the personality of every single person buried in a grave. It is as if all this were lost the moment the dead person was buried according to custom, sometimes accompanied by grave goods made especially for this purpose, as if to

assure that everyone would be exactly alike in death.

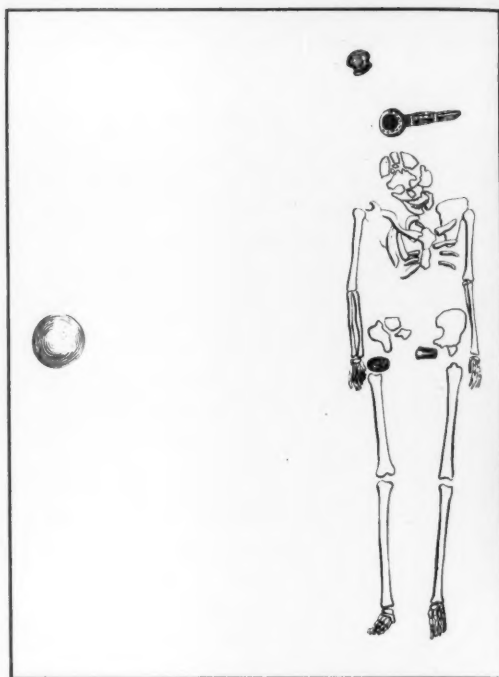
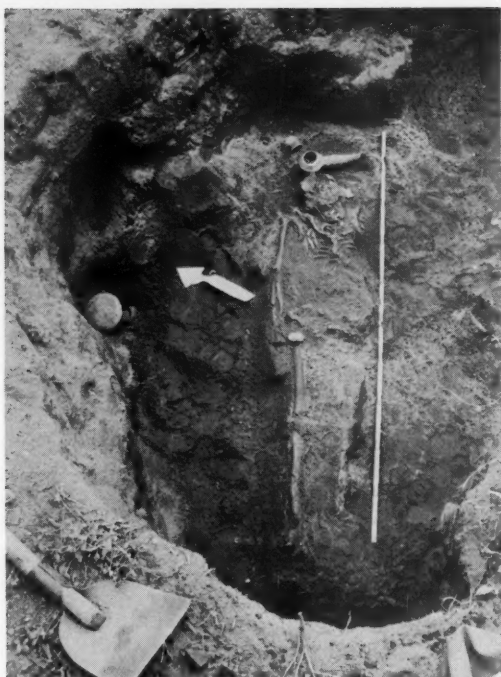
This lengthy introduction describes some of my thoughts while excavating graves in Central America during 1958-59. At that time I was fortunate enough to encounter two graves which gave some clues as to the occupation of those interred in them.

THE FIRST GRAVE was found accidentally while I was digging a test trench in a dwelling site at Los Hornos. This site, so called because of two ovens formerly used for drying tobacco but now crumbling away, is situated about a mile northwest of Moyogalpa, on the island of Ometepe in the Lake of Nicaragua (Figure 1). The island itself is a beautiful spot for a dig. From the air it looks roughly like a figure-of-eight, with both circles filled by cones. These are the two volcanoes which originally built up the island and gave it its present name (*ometepe* means "two mountains" in the Nahuatl language). The one in the south, called Madeira, is dormant, but Concepción, in the more heavily populated north end, is highly active and erupts about every five minutes (Figure 2). The prevailing east wind drives ashes and fumes down the side, and sometimes the air of Moyogalpa, which lies on the western shore of the island, smells heavily of sulphur. From Los Hornos we had a magnificent unobstructed view of the volcano, as the old inhabitants of the site certainly had too.

We—that is, my faithful assistant Luis Nissen, delegate of the *Asociación para la Conservación y Estudios Arqueológicos de Nicaragua*, and I—worked here with a



2. Concepción volcano as seen from Los Hornos. The cloud cap is a virtually permanent feature produced by the moist easterly winds from the Caribik, which condense here.



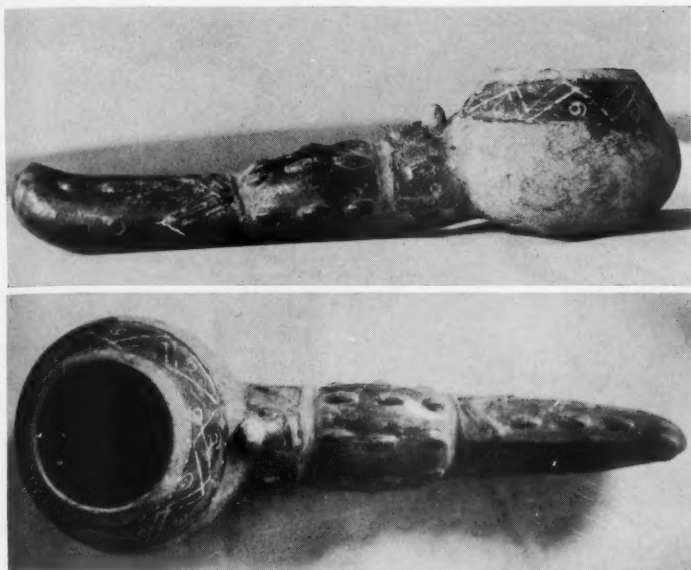
3. Burial 1 at Los Hornos, shown in plan and photograph. (The white arrow in the photograph points north.) Above the skull is the incense ladle and the small brown vessel. At the extreme left are the two Palmar-style vessels, one on top of the other. On the left hip is the bone tube, on the right hip the green stone. The pottery ring is obscured by the bones of the right hand. The skeleton is 1.73 m. long.

## Shaman Graves *continued*

crew of six. Abundant sherd material was recovered from a trench dug into a deep midden whose upper layers were disturbed, probably by agriculture and building activities. The trench was nearly terminated when suddenly I was called by one of the workmen. He had encountered bones, which sometimes occurred among the pottery together with a few shells. As bones tend to be very brittle, I used to remove them myself. This time, however, they had already been removed while I was observing another feature at the other end of the trench. They proved to be two long arm or leg bones. Something about them seemed curious and therefore I laid out a larger trench, which gradually was dug down to 90 cm., slightly above the level in which the bones had been found. My hunch was correct, for as we worked down slowly and carefully, the outline and then the various parts of a skeleton gradually emerged, accompanied by several objects.

The skeleton was on its back, lying very straight with

the arms extended along the sides of the body (Figure 3). Its head lay toward the northeast. Behind it had been placed a beautiful incense burner, thus far unique (Figure 4). It is a combination between a bowl and a ladle, its hollow handle shaped in the form of a stylized alligator. The open mouth of the animal holds a bowl with a slightly incurving rim. The ground color of the rim is red, while beneath it is a broad blackish-brown band ornamented with fine white lines. The same dark color was used for the handle, which is also encircled by two red stripes. This beautiful example of ceramic art, as well as all the other artifacts from this grave, are now in the Museo Nacional at Managua, Nicaragua. Farther beyond the head was a small brownish vase of utilitarian type (Figure 5). At the northwest, at a distance of 1.05 m. from the skeleton, there was another feature which I first thought belonged to the grave, too, since the boundaries of the interment could not be discerned in the brown soil. This consisted of two pottery vessels, one on top of the other (Figure 6). The upper one, an ovoid shape with an incurving mouth, was up-



4. Two views of the incense ladle from Burial 1, Los Hornos. The hollow handle in the shape of an alligator with opened jaws is painted dark brown, with two red bands encircling it. The mouth holds a bowl whose lower part and rim are red, while the dark brown band is ornamented with white lines. Length 29.5 cm.



5. Small brownish vessel without ornamentation. Height 7.3 cm.



6. The two Palmar-style vessels from near Burial 1. At left is the one which was on top. It is dark brown, in some places blackish, and is ornamented by groups of grooves made before firing. Height 11.65 cm. The vessel which was below (here at right) is painted a brilliant dark red at the bottom. The middle part is yellowish brown and shows broad-line incision. This vase is possibly also of Palmar style. Height 16.3 cm.

side down, closing the opening of a larger vase with an ornamented, flaring rim. Both vessels, while different in color, are ornamented with broad-line incisions and can be characterized as "Palmar Ware," first described by Bransford in 1881. This ornamentation, which is thought to be early in Central American history, as well as the fact that very few similar sherds were found in

the vicinity, seems to suggest that these two vessels are from an earlier burial, possibly an urn burial as described by Bransford.

Thus far nothing indicates the profession of the deceased. The first sign came when we cleaned the pelvic region of the skeleton. Here, on the left side, appeared a bone which did not belong there. Furthermore, it



7. Bone tube found on the left hip of the skeleton in Burial 1, Los Hornos. It has been broken lengthwise by earth pressure. Length 5.2 cm.



9. Ring shaped from an old potsherd. The top is red, and around the central hole it is fire-blackened. Diameter 3.1 cm.



8. The green egg-shaped stone found on the right hip of the skeleton in Burial 1. Length 6.1 cm.

## Shaman Graves continued

looked as if it had been worked. When the dirt had been entirely removed, it turned out to be a tube fashioned from a hollow bone (Figure 7). Still, it could have been an ornament, but that idea vanished when we discovered on the right hip, in the same position, an egg-shaped, polished green stone (Figure 8). It had no perforation and therefore could not have been used as a pendant or other ornament. Finally, a flat, ring-shaped object, probably fashioned from an old potsherd (Figure 9), was found beneath the beautifully preserved bones of the right hand.

Naturally these objects aroused our curiosity as to their use and their significance as grave furniture. Various opinions were offered, but soon the idea that they might be instruments for shamanistic rites came to the fore. From ethnological studies it is known that medicine men, especially in South America, used (and still use) a hollow tube consisting of wood, bamboo, reed, bone or other material for their magic cures. After certain rites, varying among the different tribes, they place one end of the tube on the affected spot, while sucking at the other end. It is thought that by this operation they remove the evil spirit, ghost or object which magically entered the body of the patient and caused his illness.

Here the egg-shaped stone also comes into the picture. Among other objects, stones are often regarded as causes or abodes of illness, especially if they are curiously shaped or of rare material or color. Many Indians think that such stones were introduced into the body of a person by an enemy, either alone or, more often, with the help of a shaman, and that only a medicine man can suck it out of the body again. He would later take it out of his mouth, exhibit it, and then throw it away, bury it or send it back to the enemy by magic, according to the custom of the tribe. The stone in question did not originate on Ometepe, for I failed to find any geological material of this kind. It was, therefore, possibly of foreign origin and excellent for this kind of practice. Whether the egg shape also played a role is difficult to decide, since not enough is known on this subject as it concerns Nicaragua.

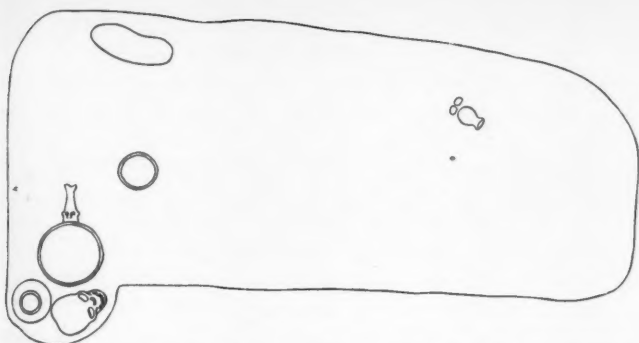
The significance of the pottery ring is still a riddle. I know of no rite for which it would be necessary, but it must have been of importance because the dead man had it under his right hand. Perhaps the fact that it was fire-blackened around the large hole may some day clear up the mystery. On the other hand, the presence of the incense ladle is not difficult to explain, since the use of smoke, especially from incense, was and is highly important during cures.

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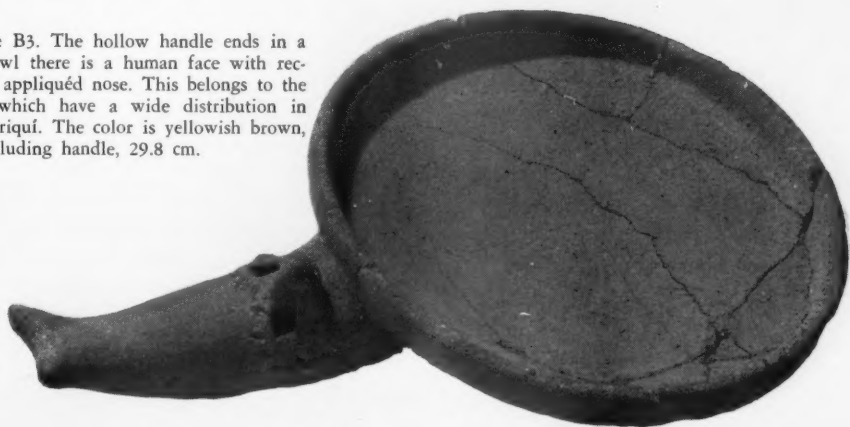
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10. Plan of Grave B3, mound 1, Buenos Aires. The upper end of the grave is roughly at the west. The skull, the olla and the incense ladle are concentrated in the niche at the southwest. Near the north wall is a single stone, thought to have fallen into the grave after the burial. Between it and the incense ladle stands the polychrome bowl. To the east, near the north wall, lie the small, crude vessel and the two "sukia-stones."

11. Incense ladle from Grave B3. The hollow handle ends in a fish tail, while nearer the bowl there is a human face with rectangular eye-openings and an appliqué nose. This belongs to the Bisquit group of ceramics, which have a wide distribution in southeast Costa Rica and Chiriquí. The color is yellowish brown, with no painting. Length, including handle, 29.8 cm.



13. The small crude vessel from Grave B3, with the two "sukia-stones." The pot, carelessly made of brown clay and unpainted, is the first of the kind found in this area. Height 6.4 cm. The so-called "sukia-stones" are well rounded, water-worn quartz pebbles.



12. Polychrome bowl with three small feet, from Grave B3. This belongs in a series of polychrome ceramics distributed in the same general area as Bisquit pottery. This particular variety is called Buenos Aires Polychrome. The geometric painting is in dark red and black on a yellowish cream background. Height 7.3 cm.





## Shaman Graves continued

All in all, there seems little doubt that here we chanced upon the grave of a shaman, or *sukia*, as he is locally called, accompanied by his instruments. Many things, especially herbs, are missing, because these were perishable, but nevertheless we get some idea of practices on Ometepe Island in pre-Columbian times.

THE OTHER EXCAVATION which concerns us here took place in southeastern Costa Rica. I dug in December 1958 and January 1959 at Buenos Aires, in the Valle del General. After excavating in another burial mound, I returned to the first one, on which I reported some time ago (ARCHAEOLOGY 10 [1957] 258-263). With some luck I got permission to test another part of this large mound. Although the area was much disturbed, four graves were found which added important knowledge to the material already accumulated. Two of the graves were of the usual type, but under one of them the earth continued to be soft and was obviously mixed; therefore we continued to dig down. When we reached a depth of about 1.50 m. we found that we were already right inside two large graves. These were placed parallel to each other and nearly at right angles to the upper one. They differed from all the other graves in both mounds in that they had no slabs or even small stones covering them: this was why we found ourselves suddenly inside the graves themselves. One grave (B4) contained only a small stone celt, the only one found in any grave at Buenos Aires. The other one (B3) was more richly furnished and had an odd shape: there was a small niche in the southwest corner (Figure 10). Here the bulk of the material was concentrated. Farthest back in the niche stood a plain olla, or jar, broken by pressure. East of it, still inside the recess, was a badly broken and extremely soft skull which we tried to salvage, unfortunately without result. Just outside the niche and partially closing the opening was a large incense ladle, also broken by pressure (Figure 11). The handle is in the shape of a fish tail but adorned with a human face which pointed toward the opposite (north) wall. More centrally placed, east of the niche, stood a straight-walled polychrome bowl with three small feet (Figure 12). While these objects more or less formed one group, three other artifacts were found close together in the east end of the grave. These were a small, very crude and atypical pottery vessel and two highly polished and rounded quartz stones (Figure 13). Seeing them, the workmen immediately called them "*sukia*-stones" and told me that stones of this kind were still being used by the shamans in the nearby Indian villages. They searched assiduously for a third stone, since in their

belief three stones are needed for curing performances. Nevertheless, we did not find another one.

These stones gave a certain clue to the profession of the deceased, and this was strengthened by the presence of the incense ladle, the only one found among fifty graves at Buenos Aires. Whether the skull belonged to the owner of the grave or whether it was a magico-religious object or a trophy is difficult to say. The grave was certainly large enough (1.93 m. x 0.84 m.) to accommodate a body, but in that case traces of the bones should have been there, especially since the skull was clearly visible. Another point is that many of the other graves were either too small for a body or the pottery vessels were placed in such a way that there was no room for any. It is therefore highly probable that secondary burial was practised here, as was still done some fifty years ago among the Talamancas tribes. Unfortunately the soil conditions are so destructive that only teeth and, in rare instances, the outlines of skulls are preserved, which give no direct evidence as to the kind of burial usual among the ancient inhabitants of Buenos Aires. Therefore the significance of the skull in B3 must remain unsolved.

DURING THE SEASON OF 1958-59 forty-six graves were excavated in Nicaragua, Costa Rica and Panama. The two described above were the only ones which gave clues as to the profession or the personality of the human beings buried in them. It is doubtful that all the others were farmers and exactly like one another, since the societies to which the graveyards belong were already developed and a certain specialization is to be expected. Elaborate polychrome pottery and fine gold work indicate the existence of skilled craftsmen, but up to now we have obviously not found their graves or have not recognized them. Still we hope that one day we shall be able not only to reconstruct political and cultural history, or the general outline of various cultures, but also to recognize the individuals and their personal rôle within their tribe or nation.

THE 1958-59 EXPEDITION was aided financially by the German Research Council (*Deutsche Forschungsgemeinschaft*), Bad Godesberg, and the Ibero-America Foundation (*Ibero-America-Stiftung*), Hamburg. In Nicaragua, aid of various kinds was given by the *Asociación para la Conservación y Estudios Arqueológicos*, Managua. The author is especially indebted for assistance to the late Mr. Gerardo O. Nissen and his son Luis, both of Managua, and to Dr. Doris Stone and Mr. Charles Balser, both of San José de Costa Rica. He also wishes to thank his two foremen, "Totq" Juarez, of Moyogalpa, and Florentino Saldaña, of Buenos Aires, who made these investigations successful. Drawings are by Mr. Heino Jaeger after field sketches by the author. Figures 6 (right), 11-13 by Mr. Cantzler of the Hamburg Museum, others by the author.

# APOLLONIA

## City of Statues By Arthur Kahn

ANCIENT GEOGRAPHERS classified Apollonia, in southern Illyria, as the most important of the thirty or more cities of the Mediterranean world bearing the name of the Sun God. At the Olympic games this Apollonia was listed as eighth in importance among the participants. Cicero visited it and called it "urbem magnam et gravem." Strabo praised it as "an exceedingly well governed city." By the early first century B.C. it had become an important seat of learning, and Octavius Caesar was a student at its famous school of rhetoric at the time when he received word of his uncle's assassination. Because of its wealth and magnificence it was known as "the city of statues."

Apollonia was built on two hills rising out of rolling countryside in the rich valley of the Aos River (now called the Viosa). These hills were joined by a wall. The larger one was terraced, and the broad leveled areas

were girdled by supporting walls. The acropolis, on the smaller hill, is even larger in area than the Acropolis of Athens.

Today the Albanian Archaeological Institute, aided by Soviet specialists, is conducting large-scale excavations at the site of the ancient city, whose ruins lie in southwestern Albania, within fifty miles of the Greek frontier and less than five miles from the Adriatic. According to Selim Islami, the youthful director, this site is the "most important archaeological center on the Adriatic, a treasure house of ancient Greek and Roman culture."

APOLLONIA'S HISTORY covers approximately a thousand years, from the sixth century B.C. through the fourth century of our era. In 588 B.C. two hundred colonists from Corinth and Corcyra founded the colony "ten stadia from the River Aos and sixty from the

General view of the residential area of Apollonia, in Albania, showing the mosaic floors and column drums lying as they were excavated. In the background can be seen the old bed of the Aos River.





Excavations in progress at Apollonia.



An obelisk, the symbol of Apollonia, still standing on its base just outside a massive terrace wall.

## Apollonia continued

sea" (Strabo vii.5.8). The town was founded as a trading post for commerce with the neighboring Illyrian tribes. As the city prospered, it extended its trade relations to Magna Graecia and even as far as present-day Rumania and Hungary.

From artifacts and inscriptions uncovered in the necropolis, as well as from the monuments in the city itself, Albanian archaeologists have been able to reconstruct much of Apollonia's history.

Until the third century B.C. Apollonia enjoyed ever-increasing prosperity. In 229 the city fathers recognized Roman hegemony, but the Romans were unable to subdue the Illyrian tribes in the hinterland until early in the first century after Christ. During these war years Apollonia stagnated; no significant construction of this period has been identified.

With the establishment of the Augustan peace, however, Apollonia enjoyed a renaissance. The city was completely replanned and great public buildings and villas were constructed. The decline of Roman civilization which began at the end of the second century did not affect Apollonia until the latter half of the third. Excellent sculpture and mosaics were still being produced in this provincial city at a time when work of such quality had become rare at Rome. But at the end of the third century Apollonia's arts and architecture suffered a sharp decline. During the succeeding period statues were mass-produced; only the heads were individualized, and these without subtlety of characterization or originality. In general, construction techniques remained advanced but materials were shoddy.

In the fourth century Apollonia suffered three catastrophes which ended its existence: a disastrous earthquake, the shifting of the riverbed and the invasion of the barbarians. Since no furniture, small utensils or other movables have been discovered on the site of the old city, the Albanian archaeologists believe that the population gradually deserted the site. In addition to these calamities, the general decline of trade within the empire and the growing pressure of the barbarians affected Apollonia's role as a commercial center. When the Visigoths overran the city at the end of the fourth century, they probably found few citizens defending its walls.

But Apollonia did not disappear. In the fifth century it became the seat of a bishop. An episcopal church and a monastery dating from the eighth century still stand at the outskirts. The builders used marble tombstones and scraps of Greek statuary indiscriminately as building materials. The monastery is now being reconstructed to serve as a museum.



Parts of mosaic floors found in a sumptuous third-century house. *Left*: a battle scene; *right*, marine motifs.

THE RUINS OF THE CITY were gradually covered over, chiefly by dust carried by strong winds from the sea. Even now these winds permit excavation during only four months of the year. But Apollonia's existence remained known. Travelers to the region during the last centuries remarked on the magnificent statues in nearby churches and peasant homes. During World War I an Austrian Army officer mapped the general outline of the city. After the war a French archaeological mission, under the direction of Leon Rey, obtained a concession from the Albanian government and spent thirteen years uncovering important monuments and extensive portions of the walls. The finds were assembled in a museum in nearby Vlora (Valona). When the Italians occupied Albania in 1939, they pillaged the museum and many of the finest treasures of Apollonia were irretrievably lost.

In 1948 the Albanians undertook to continue the excavations. But not until 1957, coincident with the founding of the first university in the country, were they able to mount a concentrated effort. It was decided that the entire archaeological force of the country, augmented by foreign experts, would be used in Apollonia and that other Illyrian, Greek, Roman and Byzantine sites would

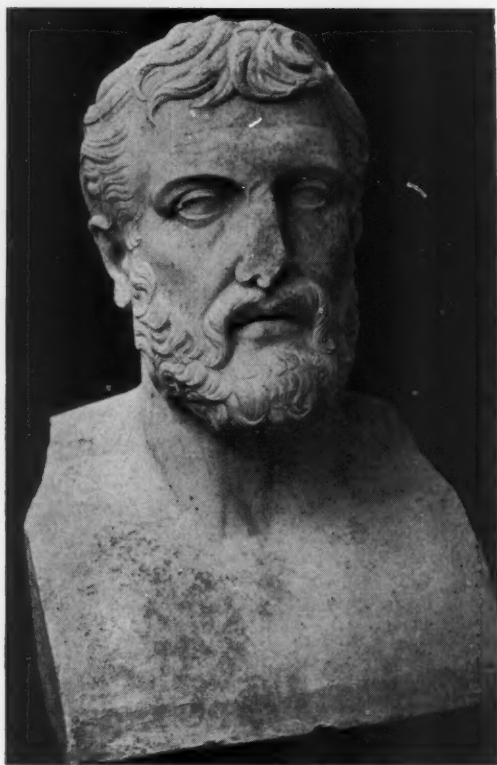
be at least temporarily ignored. In 1960 some four hundred people participated in the digging at Apollonia, including fifteen archaeologists, fifteen technicians, thirty-two students from the university at Tirana and workers hired in the neighboring villages.

Only a small portion of the city's area has been uncovered, but the general plan has been determined. The outer wall enclosed about three hundred and fifty acres, in which some forty thousand people lived at the height of Apollonia's prosperity. During the *Pax Romana* additional quarters were constructed outside the defences.

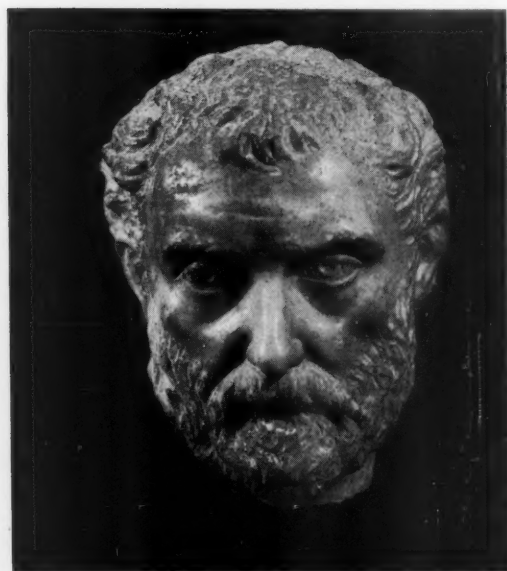
The oldest portion of the city walls faced the Illyrian tribes in the western hinterlands. Built in the fourth or fifth century B.C., it was constructed entirely of hewn stone blocks. The later wall, a product of the city's greatest expansion and prosperity, is twenty feet thick, built of brick and mortar atop rows of hewn stone blocks similar to those in the older fortifications. Through the wall led a drainage canal almost large enough for a man to walk in.

At the top of the larger hill, in the midst of a pleasant grove, are the remains of a temple to the patron deity. Surprisingly, Aphrodite and not Apollo was the divine





Sculptured busts from Apollonia. Above: Thucydides (?), Hadrianic period, copy of an earlier Greek work. Below: Demosthenes, a splendid work of the Antonine period.



## Apollonia continued

protector of the city. A portion of the floor, the bases of columns and an indication of the altar can still be recognized. From the temple there is a panorama of fertile fields and low wooded hills toward the sea less than five miles away. On one hill stands a lone column, the single remnant of another temple. The village at the foot of this hill is called Styla, the Albanian version of the Greek word for pillar. Beyond this hill, just before the sea-coast, are two small lakes. These are clues to one of the factors in Apollonia's demise, for they lie in what was the old riverbed of the Aos, which once ran past Apollonia and provided the city with a waterway down to the sea.

The most important edifices of the city were built on a lower terrace along the west slope, with a view toward the sea. Constructed during the early empire, these buildings were outside the main defence wall. Large areas of this section have been excavated. Just outside the wall an obelisk still stands on its pedestal. This was the symbol of the city and it appears on all the coins minted in Apollonia, along with a representation of Aphrodite. Near a handsome portal in the wall was the municipal cultural and administrative center. Here were an odeum, a library, a chapel and a building that may have been a school. Below, on the same terrace, are remains of an imposing public building which has been identified as the city senate. A tablet discovered among the ruins reveals that it was built by a wealthy citizen as a memorial to his brother, an officer in the imperial legions. The





Statue of a youth, perhaps an emperor, as found at Apollonia. Late second or early third century.

columns of the edifice had obviously toppled during the great earthquake of the fourth century.

Next to the senate was a small temple which may have been dedicated to Artemis. The discovery of a portion of a statue of a woman with a dog at her feet is not, however, considered conclusive evidence. Near the temple have been found thousands of fragments of pottery. Apparently this was the site of a potter's shop, where worshippers bought oil lamps and vases to use as votive offerings.

In the ruins of another building close to the senate were uncovered five enormous statues of patricians wearing togas. The excavators have named this building "the house of the magistrates." Following these ruins away from the portal in the main wall, we come to a stoa, or portico, where the pediments and broken columns indicate the existence of an arcade. Along the back wall of the stoa are emplacements for statues.

Below this terrace of public buildings, at the very foot of the hill, lies what probably was the most luxurious residential area of the city, dating from the period of the Augustan peace. Here are rows of parallel streets with a well constructed sewage system. Several impressive mansions have been uncovered in this quarter. In one of these the floors are adorned with magnificent mosaics exhibiting handsome geometric designs and illustrations of mythological figures. The plumbing in these great villas seems almost modern. Lead pipe provided water for fountains and for the various parts of the residences.

Among these impressive ruins are the remains of

primitive shelters put together from parts of statues and odd bits of broken columns and marble plaques. These were probably constructed by the barbarian invaders.

ONLY A SMALL SECTION of the ancient city has been uncovered. "My grandchildren will be excavating at Apollonia," Selim Islami, the chief archaeologist, assured me. Already the number of treasures is enormous. So many statues, vases and other artifacts were dug up in 1960 alone that the cellar of the museum at Tirana is glutted. Restorers have months of work ahead to piece together the objects found in a single season. Though a new museum is being constructed at Tirana and the local museum has been completed at Apollonia, the Albanians expect that within another year or two there will be enough works of art available from the dig to fill museums in every town in the country.

The excavations at Apollonia are important because the city's history was so long, and so rich in connections with the entire Mediterranean and Balkan world. In addition, Apollonia was an important center of civilization in itself. The archaeologists working at Apollonia are confident of making significant additions to our knowledge of the Classical world.

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ARTHUR KAHN manages to pursue a number of interests concurrently. Author of three books and of a play about Byron in Greece which is to be produced this year, he is also an editor of *Atlas Magazine* and a student in the Classics Department of New York University, where he is working for a doctoral degree in Comparative Literature. Mr. Kahn has recently returned from a year abroad, during which he visited excavations in Rumania, Hungary and Bulgaria as well as Albania.

# Soviet Archaeological Expeditions in 1961

By  
**Dmitry Shelov**  
Scientific Director

and  
**Nikolai Merpert**  
Scientific Secretary

*Archaeological Institute of the  
USSR Academy of Sciences*

EACH YEAR the field work of Soviet archaeologists is conducted on an ever-increasing scale. Since the war they have uncovered and studied thousands of important remains over the vast territory of the Soviet Union, relating to various stages of historical development between the time Early Man first made his appearance there and the late Middle Ages. Their archaeological expeditions follow a general plan drawn up in advance with an eye to illuminating the basic problems of the history of the peoples of the USSR.

The largest expeditions are organized by archaeological institutions, especially those affiliated with the USSR Academy of Sciences and its counterparts in the union republics. The republics which do not have special archaeological institutes conduct field work under the auspices of the archaeological departments of their combined Institutes for History, Archaeology and Ethnography. These institutes and departments take charge of all the archaeological work in the territory of their republic. They issue special permits for excavation and exploratory work, and see to it that the standard of work is up to the modern scientific level. Archaeological investigations are also conducted by secondary schools as well as by central or local museums. The central

Archaeological Institutes keep in constant touch with museums and other local organizations, which improves the planning of the whole program throughout the country. Archaeological research is financed by the state. The size of the budget allocation any organization receives depends on the scientific importance of the project and on the degree to which the particular organization is participating in the work. Very large expeditions are usually conducted jointly by several institutions. A great many of the expeditions are specialized in nature, studying the remains of definite periods or cultures which throw light on concrete historical problems.

Sometimes it proves necessary to conduct combined expeditions, in order to study the remains of a number of historical periods concentrated in a definite territory. This is particularly true of zones where large construction developments are in the offing, as a result of which these zones will be inundated or built over. Such thorough investigations were carried out, for instance, in the large expanses of territory which now lie under water, owing to the construction of huge hydro-electric stations both in the European and Asiatic parts of the USSR—on the Volga, Dnieper, Kama, Irtysh, Angara and other rivers. Soviet law makes it incumbent on the construction authorities to allocate special funds for the conduct of archaeological exploration in the zones affected. Archaeological work in these construction areas has of late yielded material of tremendous importance which has thrown light on the history of hitherto unstudied areas. Similar work will continue in a number of places throughout the USSR in 1961. But most of the expeditions that have been or will be sent into the field this year are devoted to special problems.

STUDY OF THE FAMOUS Upper Palaeolithic remains at Kostenky, near Voronezh, will continue. The aim of this work is to establish the cultural stratification of this important site in relation to the stratification of other Upper Palaeolithic remains in Eastern and Central Europe. Exploration of other sites relating to both Upper and Lower Palaeolithic will take place in the Ukraine, Caucasus and Central Asia, where in the past few years implements of Acheulean type have been found. The investigation of the Kapova cave in the Southern Urals is especially noteworthy. In 1959 traces of Palaeolithic paintings, the first found on Soviet territory, were uncovered there. In 1961 an expedition will make a thorough study of the paintings and explore the whole cave.

The excavations of early agricultural settlements in the southern part of Central Asia are of great historical importance. The oldest of these (for example, the Djaitun site in southern Turkmenia) are dated to the

end of the sixth and the fifth millennium B.C. They represent the most northerly remains of the great agricultural cultures of the Near East which had their centers at Jarmo and Hassuna. Numerous sites, whose strata sometimes reach a depth of thirty meters, tell us a great deal about the subsequent development of the cultures of those districts during the following millennia. In 1961 extensive work will be done at several such sites. Soviet archaeologists will try to uncover as large an area as possible in order to establish how the settlements were laid out and what kind of buildings existed in the different periods, as well as to solve other related problems.

Another group of early agricultural settlements situated in the southwestern part of the Soviet Union, along the lower Dnieper, Bug and Dniester, and along the Danube is also included in this year's program. There archaeologists will continue their investigation of the famous Tripolye culture which is closely related to the huge area of Eneolithic (Chalcolithic) "painted pottery" cultures of the Danube and Mediterranean basins. Their program also takes in settlements related to those which produced the so-called linear Danubian pottery. Remains of that culture are widespread in Central Europe, but were not discovered in the USSR until quite recently.

In 1961 a number of expeditions will study Eneolithic and Bronze Age remains in the enormous strip of steppeland stretching from the northern shores of the Black Sea to southern Siberia. Particular interest attaches to the investigations in the North Caucasus, in an area where the steppe cultures came into close contact with the Caucasian world. The Bronze Age steppe cultures will be studied in the Dnieper-Donets district, along the Middle and Lower Volga, in the Orenburg steppes and at several sites in southern Siberia. The main objects of investigation will be habitations and burial mounds, and the "Timber" (Srubnaya) and Andronovo cultures. These are of particular importance for the elucidation of the ancient history of the Black Sea and Caspian areas, including the problems of the origin and distribution of the Indo-Iranian tribes.

SOVIET ARCHAEOLOGISTS always give much attention to the study of tribal groups which are related to the early Iron Age. A good deal of work has been done in the past few years in the Scythian settlements, which offer a wealth of material bearing on various historical problems. By way of illustration we may mention the extensive and highly productive excavations at the town of Kamensky on the Dnieper. Study of such centers, including the huge Belsky settlement on the Dnieper, will continue in 1961. A number of Scythian settlements in the Crimea will be investigated; considerable digging

has already been done at Neapolye, capital of the Late Scythian kingdom. Remains of the Scyths proper as well as of the neighboring (and historically related) tribes, the Thracians and Hetts, will be studied in the southwestern part of the Soviet Union. In 1960 the unique burial place of a Scythian chieftain, dating from the sixth century B.C., was unearthed in eastern Kazakhstan. Wonderful representations in gold of reindeers, panthers, eagles, fish, etc., were brought to light. Sauromatian burial mounds of the same period, as well as later Sarmatian remains, have also been investigated in the Orenburg steppes and along the Lower Volga. In the Scythian area proper, the greatest interest attaches to the excavation of the burial mounds in the delta of the Don and in the Voronezh region. In one of the mounds of the "Five Brothers" group, situated in the delta of the Don, a stone tomb of a tribal chieftain was uncovered, revealing a wealth of artifacts, including over seventeen hundred gold objects. Equally interesting finds have been made in the Voronezh mounds, among them a bronze water vessel, golden hoops for wooden vessels, gilded armor, silver ceremonial vessels in the shape of animal heads or horns, and other artifacts. The Early



An ivory drinking horn found at Nyssa (in southern Turkmenia), capital of the Parthian state.



*Above: The Koi Krylgan Kala fortress, which lies south of the Aral Sea, two miles east of the Berkut-Kalinsky Oasis, as it appeared before excavations began. Below: The fortress after excavation. Its construction dates to the fourth or third century B.C., a later portion to the first century B.C.*



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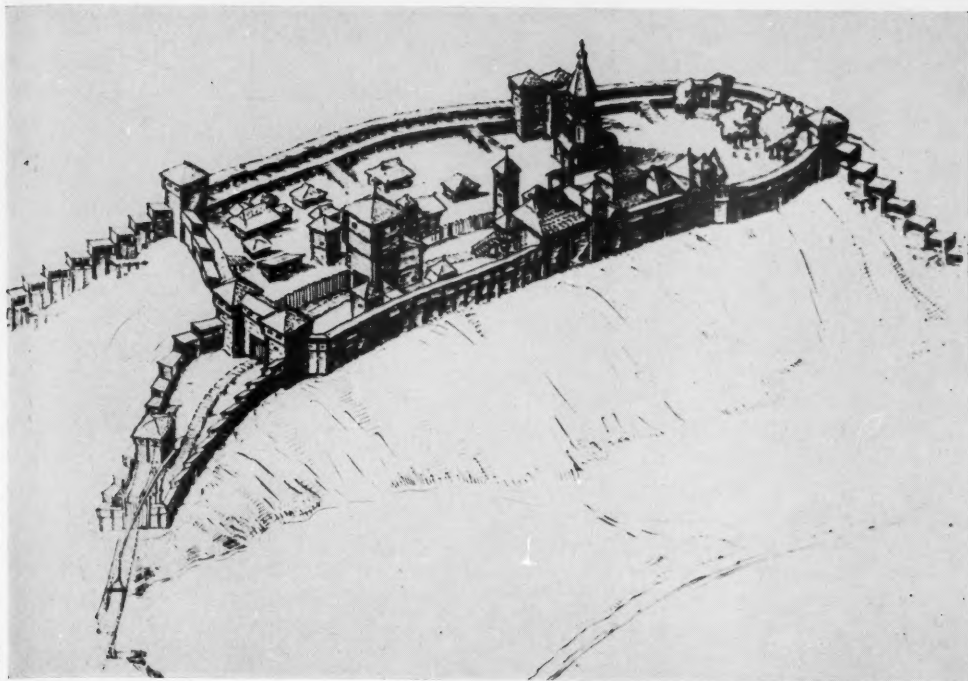
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Reconstruction of the fortress of Lubech, dating from the eleventh and twelfth centuries.

## Soviet Expeditions continued

Iron Age will be studied by expeditions working in the North Caucasus and Transcaucasia, where once existed the oldest state in the Soviet Union—the state of Van. Further excavations will be conducted at the fortress towns of Teishehani and Erebuni.

Parties will be doing field work in the forest-steppe and forest belts of the European part of the USSR, where many ancient towns and burial mounds have been uncovered. These relics have great bearing on the problem of the origin of Finno-Ugrian and other modern peoples and their ancient history.

The ancient cities of the northern Black Sea coast have been the subject of study for a number of years. Soviet scientists have made considerable headway in reconstructing the settlements of the ancient states of the Black Sea coast. In 1961 excavations will continue in the Chersonese area and the Kerch and Taman peninsulas.

An underwater expedition is continuing to make a systematic reconnaissance of the sea bottom in the vicinity of the ancient Black Sea coastal towns in order to find out more about submerged parts of their residential sections, ancient harbors and sunken ships.

Relics of ancient times are being studied in the Soviet Central Asian republics. Large-scale excavation has been carried out at Nyssa in southern Turkmenia, the Parthian capital in the later Greek period. Remarkable architectural remains as well as objects of art uncovered there have greatly increased our knowledge of ancient Greek culture as it spread eastward. Several dozen magnificent ivory drinking horns were discovered there, with delicate carving and sculptural ornamentation.

The scale of archaeological investigation is being extended every year in the ancient Khorezm oasis. After many years of study of this site, a new and hitherto unknown culture has come to light. In other parts of Central Asia the excavation of early mediaeval remains, well known among which are the towns of Sogdiana (chiefly Pendjikent), will also continue. At Pendjikent a unique palace and temple group with wonderful frescoes of mythological and historical scenes is being studied.

MUCH ATTENTION WILL BE GIVEN to the investigation of early mediaeval remains in Eastern Europe, which have a great deal to tell us about the origin of nationalities now living in the USSR and, above all, about the origin of the Slavs. Decided interest attaches to the work



## Soviet Expeditions continued

in progress in the Upper and Middle Dnieper country, where settlements and tombs of ancient Slavic tribes and of their neighbors have been unearthed.

As might be expected, Soviet archaeologists are giving much of their attention to the study of towns of the ancient Russian state. Extensive excavations which have been under way for many years in such old Russian cities as Kiev, Chernigov, Novgorod, Riazan, Vladimir and Moscow have revealed a wealth of material with whose help many aspects of the economic, social, political, and cultural history of the East Slavs will be clarified.

As before, Novgorod will be the center of the most important investigations. The systematic excavation of that ancient town, which has been progressing on a large scale for more than ten years, now has brought to light whole blocks of dwellings and shops, with sidewalks and drainage systems. Thousands of important finds have been made there. The discovery of business documents on birch bark as well as private letters, dating between the tenth and the fourteenth century, has extended the historical horizons of that period. Documents like those found at Novgorod have also been uncovered in other Russian cities.

A number of old Russian towns in the Dnieper area, in the territory of Kiev Russ, are to undergo intensive study in 1961. Excavations will begin in the town of Vyshgorod, south of Kiev. Study of the feudal castles, about which very little was known until now, is of great interest. During the past few years fruitful work has been under way at Lubech, near Chernigov, where there

is a castle of the eleventh and twelfth centuries with fortifications, a moat and a drawbridge.

Of great interest are the excavations of the town of Iziaslavl in the Ukraine, destroyed during the Tartar-Mongol invasion and never restored to life. Scientists have recreated the whole picture of the capture and destruction of the town during the tragic winter of 1240.

Archaeological investigations started earlier in Moscow will also be continued. Large construction projects in the suburb of Zaryadye have led to such discoveries as rows of dwellings and mercantile establishments dating from the twelfth to seventeenth centuries; these will be further investigated during the current year. Similar work has resulted in many important finds on the Moscow Kremlin grounds, among them a previously unknown fourteenth-century defence system.

Besides studying these ancient Russian urban centers, Soviet archaeologists are also looking for traces of early village life in Russia, and in 1961 will continue to work along those lines as well.

In this brief review we have noted only a fraction of the main trends in archaeological field work in the Soviet Union during 1961, and mentioned only a few specific investigations. The real scope of this year's research program is incomparably larger than can be gathered from our account. Hundreds of expeditions will be going into the field this year, all over the country.

In conclusion we would like to note that aside from the work being done in the Soviet Union, our archaeologists are also excavating and conducting research abroad. In 1961 they are participating in archaeological projects in Mongolia, Bulgaria, Albania and the United Arab Republic.



One of a number of letters inscribed on birch bark, found at Novgorod and dating from the Middle Ages. The letter, written by a man to his brother, concerns a sale or the repayment of a loan; the exact subject is not clear.

# Three Campaigns at Biblical Shechem

By James F. Ross and Lawrence E. Toombs



Tell Balatah, the site of ancient Shechem, seen from the east. Mt. Gerizim is on the left and Mt. Ebal on the right.

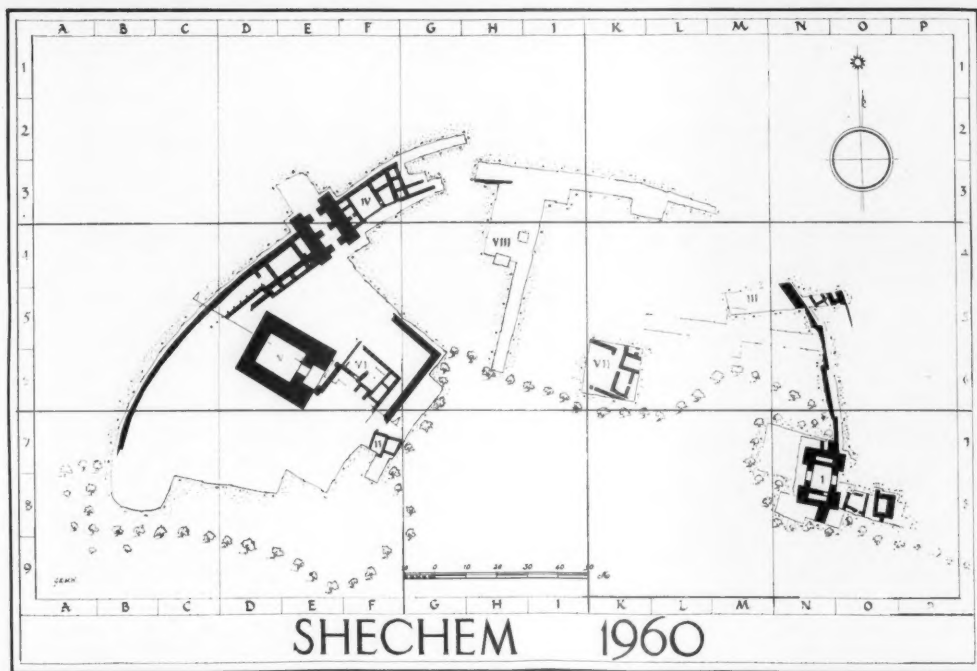
THE LOW MOUND covering the remains of ancient Shechem rises from a fertile plain at the eastern entrance to the narrow valley between Mt. Ebal and Mt. Gerizim. A city located here was in a position to control important trade routes from Egypt through Jerusalem (forty miles to the south) to the centers of culture in Syria and Phoenicia. The difficulty of defending a site overshadowed by two mountains was more than offset by the presence of an abundant water supply, provided by the fine spring at the southeast corner of the *tell*, or mound.

Egyptian texts of the XIIth Dynasty indicate that Shechem was a strategic city of international importance as early as 1800 B.C. Abraham's first contact with the inhabitants of Palestine took place at Shechem (Genesis 12:1-7), and the stories of the Hebrew patriarchs show that during the eighteenth and seventeenth centuries B.C. Shechem was a center of Canaanite religious and political life. The Amarna letters (1400-1350 B.C.) speak of Shechem, under its prince Lab'ayu, as playing an important rôle in the intrigues against Egyptian control of the Palestine area. The city is not listed among those

conquered by the invading Israelite armies under the command of Joshua, but immediately after the conquest (ca. 1250-1200 B.C.) it appears as the rallying point for the twelve-tribe Israelite confederacy and as the site of an annual covenant renewal ceremony (Joshua 24). During the tribal period Shechem was the scene of an attempt to make one of the sons of Gideon king (Judges 9). In the struggles associated with this premature experiment in monarchy the city was destroyed.

During the early Israelite monarchy Shechem retained its position as the most important city in the kingdom after Jerusalem. Rehoboam went there to be crowned king in the northern part of his territory, and the city was for a short time the capital of the independent northern kingdom after the disruption of the monarchy. When the capital was moved to Samaria, Shechem remained the center of an administrative district until its destruction by the Assyrian armies of Shalmaneser V (724 B.C.).

The ruins of such an important city could not escape the attention of archaeologists. On the basis of its loca-



General plan of the areas excavated by the end of the 1960 season.



The palace area as it appears from the north. At the left is the area occupied by the streets, and at the upper left the Samaritan House (II on the plan). The temple forecourt is in the middle background, while the temple itself is at the upper right.



Burial of a child in a jar beneath the floor of the second palace. Note the edge of one of the stone slabs making up the protective "house."

## Shechem continued

tion and the remains of walls visible on the surface the tell was identified in 1903 as the site of Shechem. A series of German expeditions (1913-14, 1926-27, 1928, 1932 and 1934) cleared the face of a massive defence wall and the foundations of an impressive temple; in addition, extensive trenches were cut into the north and east sides of the mound. The results of these expeditions were never adequately published, and the dates of the fortifications and temple structure remained uncertain.

The Drew-McCormick Archaeological Expedition began its work with a short season in 1956, followed by two longer and more intensive campaigns in 1957 and 1960. The work is governed by three aims: to clarify the problems remaining from the earlier excavations, to develop a complete picture of the history of the city, and to provide a training ground in the field for students of Palestinian archaeology.

This report will attempt to present a general picture of the history of Shechem as revealed by the excavations. Since the work is still in progress, gaps inevitably exist. It is hoped that most of these may be filled in by future excavations. Two additional seasons, in 1962 and 1964, are projected.

THE EARLIEST INHABITANTS undoubtedly clustered

around the spring which now supplies the village of Balatah, outside the area excavated by both the German and American expeditions. But there is ample evidence for early occupation elsewhere on the tell. In areas used later for a massive temple and a series of streets (V and VI on plan) semi-nomadic people of the early fourth millennium B.C. dug shallow, clay-lined pits, which they probably covered with tents of animal skins. After these had been abandoned, floors of packed earth were laid; these were renewed from time to time. These people were really only "campers"; they constructed no buildings and were apparently much less advanced than their contemporaries at Jericho and elsewhere. Nor have any buildings of the Early Bronze (3000-2100) or Middle Bronze I period (2100-1900) been discovered, although there is evidence from scattered pottery that the site was occupied during these centuries.

The real birth of Shechem (the name is found in Egyptian texts from the nineteenth century B.C.) was due to the Hyksos, a people of mixed racial origin including Semitic elements. They occupied Palestine and moved on to rule Egypt for more than a century and a half (1720-1550). The beginnings were modest; so far only a packed earth floor with a sunken, stone-lined pit has been found, dating from the first half of the eighteenth century. But the Hyksos were not slow to fortify this advantageous site. They constructed a massive stone wall separating what was to be the palace area from the rest of the city (the L-shaped wall to the right of VI on the plan) and erected the first system of defence walls. Inside the fortified area they laid the walls of their first palace, leaving a space between its outside wall and the L-shaped wall to provide for a street and a drain. (Nine superimposed cobblestone streets have been discovered.) Only a few walls of this first palace, dating from the mid-eighteenth century, have been excavated. Its successor, however, is well preserved; it consisted of at least nine rooms of which three, bordering on the streets, were work rooms. One room was provided with two clay ovens, a kneading block and a stone-lined pit, probably for grain. Other rooms were carefully paved with large flagstones. Nor did the Hyksos neglect to dedicate this palace in the proper fashion. Before laying the floor they buried a small child in a jar and protected this foundation sacrifice with a "house" made of rough stone slabs.

After about fifty years the palace was again rebuilt; a new series of streets was laid and a fresh foundation sacrifice was offered. There is some evidence of burning between the second palace and the third as well as between the first and second, but the ground plan remained the same; indeed several walls of the older palace were simply re-used or widened. Few distinctive features of





Looking east through the East Gate. The steps in the foreground lead up to a roadway, with the guard towers of the gate on either side. The two orthostats in the right foreground have been knocked out of line, probably by a battering ram during the final siege of the Hyksos city.

## Shechem continued

the third building remain; almost all the rooms were excavated by the Germans to a point below floor level. The impressive central court is worthy of mention, however; it had six heavy pillars at its north end and one in the center. Otherwise only bare stone walls remain; these probably had a mud brick superstructure like the walls of the earlier palaces.

Finally, the Hyksos commenced still a fourth building. But of this only two high walls remain, and it is unknown whether or not it was another palace. We can say that these walls mark the end of a building tradition, for about 1650 B.C. the city was destroyed and Hyksos building in this area ceased.

AFTER THE DESTRUCTION of 1650 Shechem was rebuilt on a larger scale. In order to provide more living space within the walls an enormous engineering project was undertaken to extend the city limits about forty feet to the north. On this side of the city the tell merged gradually into the slopes of Mt. Ebal and offered no suitable elevation on which to found a wall. The engineers there-

fore constructed an artificial mound against the south slope of the mountain by bringing in up to twenty feet of earth fill. This mass of earth was held in place by a huge retaining wall with a free-standing mud brick superstructure which served as the outer line of defence. Within its circuit a slighter wall was erected, and the two were connected at intervals by a system of cross-walls to form a casemate. This double circumvallation was investigated on the north (IV on plan) and on the east of the city (I and III on plan). In one place the outer wall survives to a height of at least twenty feet and has stones as large as 3 x 4 feet in its outer face. The wall merits the term "cyclopean," which has long been applied to the section exposed by the Germans on the north side of the city.

Formidable as these defences were, within fifty years they required additional strengthening. The main line of defence was moved twenty to forty feet farther up the slope of the tell. It consisted of a massive outer wall, ten feet thick, connected to a slighter inner wall to form a casemate, as in the earlier plan. The disused walls now functioned mainly as retaining walls.

The most striking feature of the new defence system was the East Gate. A cobbled approach road, surprisingly narrow, ran from the south along the terrace between the





Looking south over the temple area. The various walls are identified as follows: A. The cyclopean wall. B. The later Hyksos wall. C. The northwest corner of the temple. D. The granary. Note the massive construction of the temple foundations and the stones of the granary above them.

earlier and later walls and turned at right angles into the gateway. The gate itself consisted of two huge rectangular towers (each 23 x 42 feet) the masonry of which compares in size with that of the cyclopean wall. Space was provided in them for guardrooms flanking the entry-way.

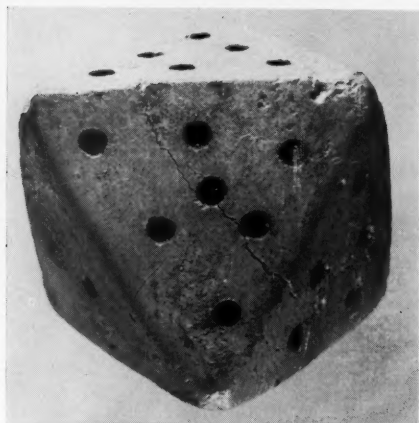
In its brief existence of fifty years the gate was destroyed three times, and the accumulated debris raised the level of the road between the towers above that of the city, so that a set of steps had to be built up to the gate level from the city side. These steps must have been laid in the very last years of the Hyksos city's life, since they show almost no sign of wear. Also in this last period the width of the gateway was decreased by the addition of four pairs of basalt orthostats, set on deep foundations.

Throughout the gate area, over the stairs and in the guard towers, evidence of the final destruction of Middle Bronze Shechem was startlingly clear. Decayed mud brick, burned beams, fallen plaster and a jumble of building stone were piled in the guardrooms to a depth of twelve feet, and four human skeletons, literally buried in ash and debris, lay on the steps. This spectacular destruction is attributed to the Egyptian armies which followed up their expulsion of the Hyksos from Egypt

by an invasion of Palestine about 1550 B.C. It effectively put an end to Shechem as a Hyksos city.

During the period just described the city was dominated by the largest temple yet found in Palestine (V on plan). Its foundations were laid in the fill brought in to extend the city limits northward, and the building was clearly designed to serve as a fortress as well as a place of worship. In plan the temple is a rectangle with outer dimensions of 68 x 84 feet and with foundation walls seventeen feet thick. It was approached from the east by an elevated courtyard. The wide doorway gave access to a small room, beyond which lay the rectangular cella. The orientation of the temple is twenty-eight degrees south of east (approximately the direction of the rising sun at the winter solstice), similar to that of the Israelite temple in Jerusalem. None of the temple furnishings have survived.

THE MASS OF DEBRIS left by the Egyptian destruction complicated the task of rebuilding Shechem. The Late Bronze inhabitants took the line of least resistance and made no effort to clear the Hyksos walls for re-use. Instead they moved back to the line of the innermost wall of the preceding period and used it as the foundation for their own much weaker defences. At the East Gate they



Eight-sided die from a Late Bronze Age level at the western end of the temple.



Ceremonial alabaster mace head from the final Hyksos destruction level.



Cypro-Phoenician jar, finely painted and burnished, found in association with the Israelite house of the eighth century B.C.



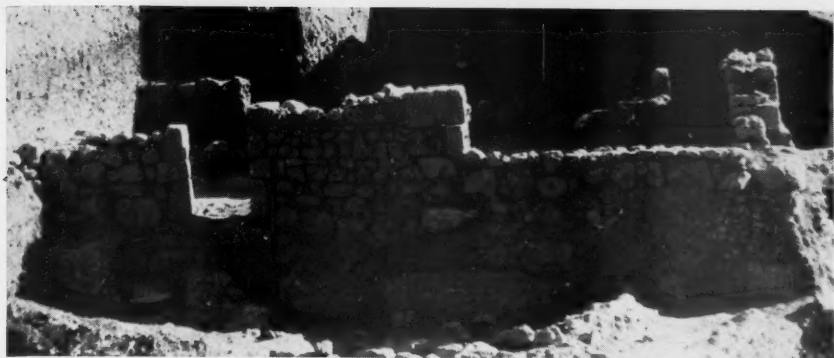
Cylinder seal and impression, from a level associated with the Israelite house. The design shows a winged animal looking over its shoulder at a "tree of life"; above hovers a winged sun disk.



Amethyst seal and impression dating from the eighth century B.C. The inscription reads LMBN, which probably means: "Belonging to (the Lord) is (my) maker."

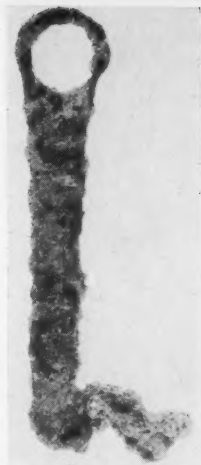


Fine silver toggle pin for fastening a garment, found in a Late Bronze Age level.



North wall of the Samaritan house (II on plan). Note the carefully prepared thresholds, door jambs and window frame.

Right: Iron key to one of the doors of the Samaritan house.



## Shechem continued

built two new towers. Only the southern one survives; it consists of two small adjoining rooms under the lowest floor of which was found the intentionally buried skeleton of a small animal, probably an ass. These guard-rooms were used continuously, with some minor structural alterations, throughout the Late Bronze Age and on into the beginning of Israelite occupation. No destruction level such as that found at Hazor (See *ARCHAEOLOGY* 10 [1957] 83-92) marks the transition from Canaanite to Israelite times. This fact was confirmed by a small excavation on the north side of the tell (VIII on plan); here again there is evidence of new building activity at the beginning of the Israelite period, but not of violence.

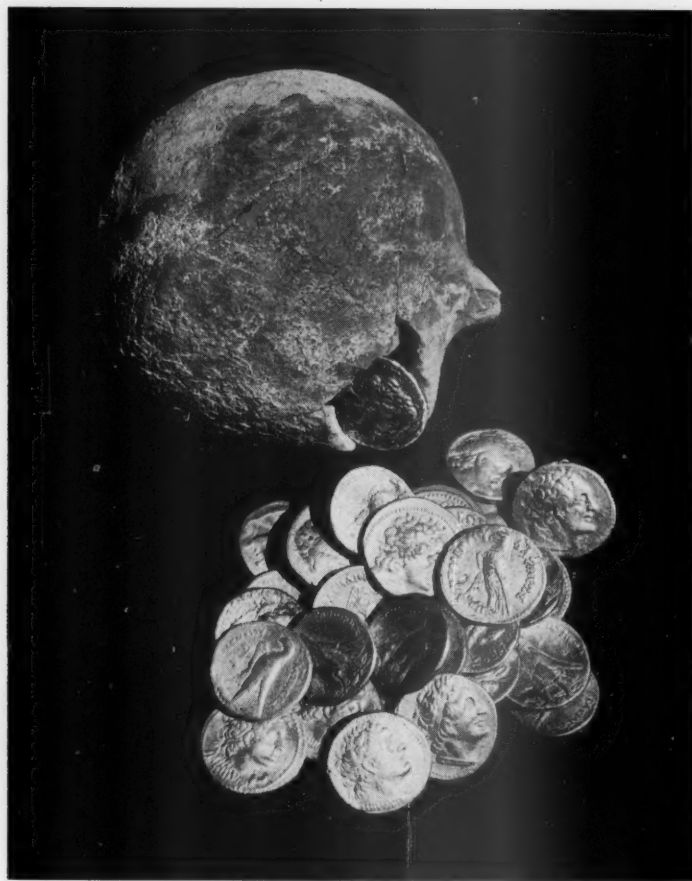
The peaceful passage of Shechem from Canaanite to Israelite control is an important historical datum. The absence of the city from lists of Joshua's conquests and its importance as a center for early Israelite tribal life have been interpreted as indicating that Shechem was in friendly hands when the Israelites entered Palestine. The archaeological data lend considerable support to this theory.

As yet little is known of the town plan or the cultural life of Late Bronze Shechem, but during the 1960 campaign an important fact came to light in the temple area (V on the plan). It had been thought that the Hyksos temple was directly overlaid by the foundations of an Israelite granary, but careful excavation within the cella revealed that an intermediate phase (represented by fragmentary foundations and floors) existed between the temple and the granary. This building, which is dated by the associated pottery, was evidently

the Late Bronze temple of Shechem, none other than the structure mentioned in Judges 9 as "the Temple of El (or Baal) Berith," the God, or Lord, of the Covenant. The bad state of the walls and the numerous pits found everywhere in the cella are eloquent testimony to the destruction of the sacred place when Abimelech, son of Gideon, took revenge on the city for its revolt against him. These pits contained pottery of the early Israelite period (Iron IA, about 1200-1100 B.C.). If this pottery can be more precisely dated it will help to establish one fixed point in the otherwise obscure period of the Israelite judges.

The forecourt, its level raised about two feet, was re-used in connection with this Late Bronze temple. On the surface were found two stone sockets, one on each side of the entrance, in which sacred stones had been set up in ancient times. Farther east is an altar platform where sacrifices were offered. Near the front edge of the platform, visible from anywhere in the city below, had once stood a huge flat limestone slab, six feet high, set in a stone socket. We found both the socket and the slab broken and thrown down from the forecourt. Ingenuity and brawn, assisted by a steel tripod and much shouting, raised the stone and its socket to their original position. The slab is by far the largest of the few surviving examples of the *masseboth*, the sacred stones of the Canaanites.

A NEW PERIOD in the history of Shechem began after the death of Solomon, with the division of Israel into Samaria (or Ephraim) and Judah. Jeroboam I, the first monarch of the northern kingdom, fortified the city as his capital (I Kings 12:25) but then moved to Penuel and eventually to Tirzah. Only fragmentary evidence of



Hoard of silver Ptolemaic coins left by a refugee fleeing Shechem when it was captured by the Seleucids. The latest coin is of Ptolemy V, dated to 193 B.C.



Seal impression found outside the Samaritan house (II on plan). Impressions on the reverse show that it was once affixed to a papyrus document.



The autograph, in Greek, of a Samaritan inhabitant of Shechem. He scratched his name, Simonides, on a potsherd.



## Shechem continued

Jeroboam's work has been discovered. But later Israelite houses have been found, one of the ninth century and one of the eighth. The latter (VII on the plan) measured approximately 30 x 40 feet, with narrow corridors along three sides surrounding a large central room and some smaller chambers. Just outside this house a beautiful cylinder seal was found, and an amethyst seal found in a disturbed Hellenistic level is probably also from this period, to judge from the script.

In the same general period the Israelites also began to use the site of the pagan temple once again; for seven centuries it had been abandoned, although the early Israelites had dug pits and silos through the temple floors. Now a granary with walls of unhewn stones was erected. It measured approximately 50 x 60 feet, and had a corridor along one side with three narrow rooms occupying the remaining width of the building. The whole structure was set into a thick layer of plaster which was laid over the walls of the temple. Quite possibly this was a government warehouse; there is evidence that Shechem was now the head of an administrative district.

This period of the city's history came to a violent end when the Assyrians under Shalmaneser destroyed the city (724 B.C.). The floors of the latest Israelite house are covered with broken, burned brick and collapsed ceilings, along with fragments of storage jars which had once stood on the roof. Israelite Shechem was a thing of the past; the pious now made pilgrimages to the temple in Jerusalem (Jeremiah 41:4-5).

**SHALMANESER DID HIS WORK WELL.** The city was virtually abandoned from the time of his invasion until the fourth century. Fragments of Greek pottery and an early coin show that there was some occupation, but Shechem was not to enjoy its former glories until after the death of Alexander the Great. The latter defiled the city of Samaria by turning it into a rest camp for his veterans; the Samaritans thereupon moved to the site of ancient Shechem because of its proximity to their holy mountain, Gerizim (see John 4, where in place of Sychar we should probably read, with the Syriac, Sychem).

There are four definite phases of Samaritan occupation at Shechem. They probably represent a series of building operations carried on by the same people and their descendants, with intermediate destruction at the hands of the rival claimants to Palestine: the Ptolemies, the Seleucids and the native Maccabees. In the first period (ca. 325-250 B.C.) the defences were strengthened by building an earthen rampart down the slope from the East Gate and new brick walls on the seventeenth-

century guardroom of the gate. A small building containing an oil or wine press was erected over the remains of the Israelite guardroom. And on top of the tell (VII on plan) new houses were laid out over the brick-filled ruins left by Shalmaneser. Because of later pits dug into their rooms it is difficult to discern their plan. We have found, however, a carefully plastered shallow basin which was used either as a wine-press or for moistening clay in the making of pottery; near it was a storage jar sunk into the cobblestone pavement.

The next period (250-200 B.C.) saw a new series of houses in this central area; three well preserved rooms have been found, as well as a street on their west side. And now the Samaritans began to occupy more of the tell. They constructed a beautiful house near the site of the now forgotten temple and palaces (II on the plan). It had carefully prepared thresholds and door jambs; in its remains were found the key to one of the rooms and a clay seal impression from a papyrus document. These houses were destroyed by the Seleucids; in one was found a cache of Ptolemaic silver coins (tetradrachms) left behind by a refugee fleeing from the city.

When they returned, the Samaritans once again looked to their defences. The first half of the second century saw the erection of a rough stone tower down the slope from the East Gate, perhaps intended to screen the ancient gateway itself. New houses were built in the center of the tell, but of these only a few disconnected walls remain.

The last period of Shechem's history (ca. 150-100 B.C.) was again filled with violence. John Hyrcanus, one of the most powerful of the Maccabean kings, is reported to have utterly destroyed the city in 128. But according to the evidence from coins, Shechem survived for a few more years; she probably held out until toward the end of the century, when John delivered the *coup de grâce*.

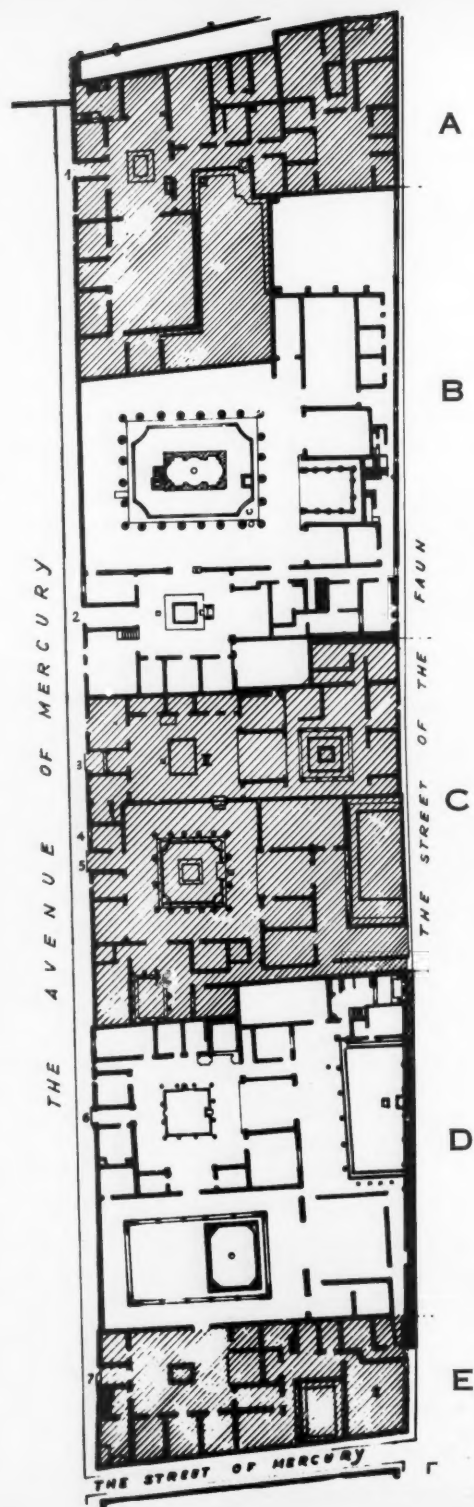
During the Roman period the mound lay uninhabited; the people settled either in a village by the spring or in Roman "New City" (Neapolis, now Nablus, where a small colony of Samaritans still lives). Today there remain only the small Arab village of Balatah and the ancient walls revealed by the archaeologists' trenches.

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THE DREW-McCORMICK ARCHAEOLOGICAL EXPEDITION is under the joint sponsorship of Drew University and McCormick Theological Seminary, in association with the American Schools of Oriental Research and with the financial support of the Bollingen Foundation. Dr. G. Ernest Wright is Archaeological Director, Dean Bernhard W. Anderson, Administrative Director, and Dr. Edward F. Campbell, Jr., Assistant Director. Dr. Toombs was a field supervisor in 1957 and Associate Archaeological Director in 1960; Dr. Ross was in charge of excavation in the palace area in 1960. Both authors are on the faculty of Drew University.

By Halsted B. VanderPoel

# The Frieze



NOT FAR from the House of Meleager, in the northwest quarter of Pompeii, old men now recline on stone seats which border other great houses of the city. Along these ancient walls once sat the slaves of Pompeian masters. Today, dozing in the summer heat, *custodes* dream of times long past, or patiently and drowsily await the closing hour, basking in the evening sun which is no longer detested as it was those many years ago. These silent sentinels provide contrast to the animation of the trinket sellers at the gates, black-gowned, gesticulating, fawning on visitors as they enter through the ancient city walls. For a brief moment the elegance of the past is harmonized with the lazy somnolence of the present.

This is the story of how a magnificent stucco frieze in bas-relief, found in a private Pompeian house, was originally discovered in 1829, only to disappear from sight some twenty years later. Then it returned to view on the walls of the Naples National Museum, about 1908, where it finally received its rightful identification in 1958. It serves to illustrate how tenaciously Pompeii clings to her secrets.

"If Pompeii is an inexhaustible mine for our knowledge of the ancient world, still it imposes a multitude of unsolvable problems to archaeologists and historians." This remark of the late Professor Rostovtzeff of Yale University to his fellow worker, Tatiana Warscher, expresses in general the problem that confronts us in trying to resolve the enigma of the Pompeian House of Meleager, so called after the faded fresco of the mythical

COVER: The Meleager Frieze: fragment from east wall of tablinum showing (left) a woman or priestess in a doorway; a Bacchant (center); (right, top to bottom) a Bacchant, Dionysus and Ariadne, and a landscape. Photo Islay Lyons.

1. Plan of Region VI, Insula ix, at Pompeii. A. House of the Duke of Aumale (The Inn). B. House of Meleager. C. House of the Centaur. D. House of the Dioscuri. E. House of CN. Caetronius Eutychius.

# e of the House of Meleager at Pompeii

lover of the virgin huntress Atalanta on the north wall of the narrow *fauces* (entrance) of the house.

Dr. Warscher first visited the ruins of Pompeii in the year 1911. In the intervening half-century she compiled, among other works, the *Codex Topographicus Pompeianus*, an encyclopedia of Pompeii, house by house, block by block, region by region, in some sixty-five folio volumes. It does not, however, include the areas worked by Professor Amedeo Maiuri, the foremost excavator of Pompeii today. Replete with descriptive quotations from the *corpus* of Pompeian research up to the outbreak of war in 1939, it contains thousands of photographs which, with her observations and comments, serve to provide a work unique in the annals of Pompeiana.

Dr. Warscher's long and fruitful activity was terminated by her death on December 2, 1960, but she will be long remembered through her works. The *Codex* will be revised and expanded over the years to serve as an invaluable tool for archaeologists.

IN SEPTEMBER 1858 Professor Fiorelli greatly simplified the locating of individual houses by dividing the city of Pompeii into nine Regions and, in turn, by assigning a number to each *Insula* (block) within these Regions.

The House of Meleager is situated in what was once the quiet and rather plush northwest sector of the city, designated today as Region No. VI. The house stands in a block known as *Insula ix* (see Figure 1), consisting of three private residences and an inn. The hostel, which is the northernmost building, was named in honor of the Duke of Aumale, the fourth son of Louis Philippe of France. From paintings found in its great *triclinium* (dining room) it has been presumed that the inn was frequented by prosperous Egyptian merchants, mostly from Alexandria, who worshipped the goddess Io under the name of Isis.

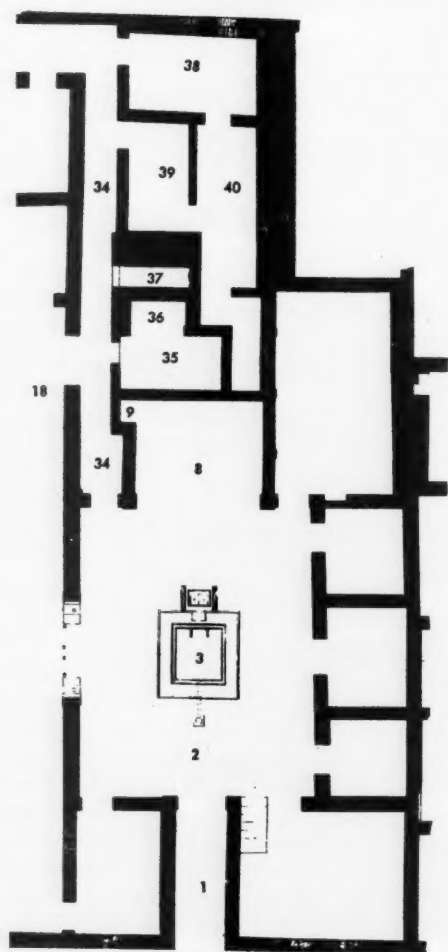
The houses to the south of the inn gave the *insula* an

aura of respectability, of quiet and of the implied snobbery of newly established wealth. Southward from the inn, patrons walking to the Forum first passed the House of Meleager, then the House of the Centaur and the House of the Dioscuri (Castor and Pollux), and lastly its annex, the House of CN. Caetronius Euty chius, which bounds the block on the south.

This, then, was *Insula ix*. Torn asunder by the earthquake of A.D. 62, rebuilt and restored at what must have been great expense, and finally buried for centuries under almost twenty feet of volcanic ash, the House of Meleager awoke once again to the warmth of the Pompeian sun on the 19th of August, 1829, nearly 1750 years after its burial. Its rebirth, however, was not accorded the fanfare which has often heralded the discovery of less pretentious houses, because of the disappointing yield of treasure, so eagerly anticipated by the excavators of the day.

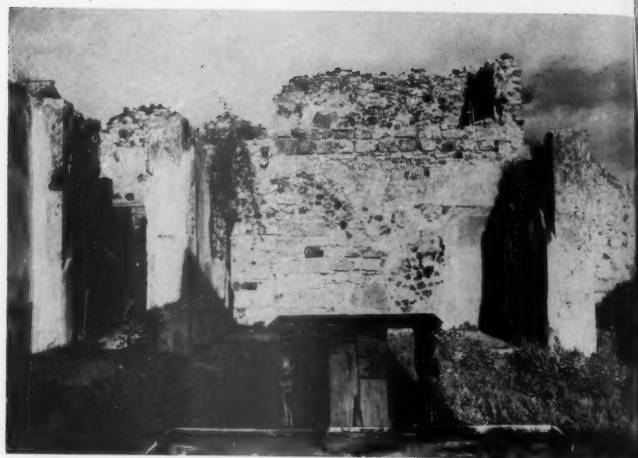
In the early days of excavation, those directing the digging appear to have been interested primarily in finding treasure, not in recording archaeological data that would be vital in ascertaining the measure of culture and artistic development in ancient Pompeii. Consequently, in the late eighteenth century, when the Bourbon archaeologists found nothing of importance in one room of a house, they would fill it in with the ash which had recently been dug out. In the early decades of the following century, diggings as a rule were not filled in again, but the immediate area might be abandoned if gold, silver, bronze or marble were not found. This apparently was the reason why the inn north of the House of Meleager was not brought to light in its entirety until 1841, some ten years after its immediate neighbor had rendered such poor findings.

Haste and improvidence marked the digging of most of the dwellings neighboring this house. Often an important personage would arrange to visit the dig on a certain date, and the excavating of a house selected for



2. Plan of part of the House of Meleager, including the tablinum. From Overbeck-Mau, *Pompeii* (1884).

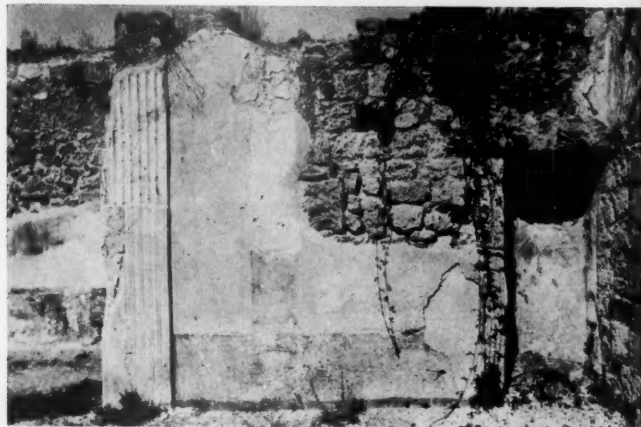
*Figures 3-5 by the author*



3. The tablinum as it is today, looking at the east wall. The entrance to the andron is seen on the left.



4. East and south walls of tablinum, showing stucco remains.



5. North wall of the tablinum. Traces of the flying figure were found on the panel at the left. The closet is on the right.





6. The flying figure on the side panel whose counterparts in the tablinum have disappeared for all time.

## Frieze continued

special exhibition would be expedited to the point of recklessness, with frequent destruction of walls, frescoes and fragile works of art. Of course this unwarranted speed in digging also had another disastrous result—there were no exact records of the areas excavated or the objects found. To this was compounded the practice of the House of Bourbon of presenting frescoes, mosaics, marbles and bronzes to an illustrious guest as a memento of the visit. Apparently very few, if any, records were kept of these presentations. Added to these practices were the uninterrupted attritions of pilferage and “unauthorized” transfer. As a result, many important pieces of art originally in Pompeii have been lost.

IN THE LAST PERIOD of Pompeii's existence (A.D. 62-79) the House of Meleager is generally believed to have been the distinguished residence of a nouveau riche merchant, one L. Cornelis Primogenes and his family, a man who seems to have been a person of caution and foreboding.

When excavated, the house proved to be almost entirely bereft of gold, jewelry and other personal belongings of importance. Now the ruins stand out bare and stark, free from the over-lavish detail and rather dubious taste which marked the last epoch of the buried city. Up to the present moment it is believed that the house was

maintained exclusively for the private use of members of the family. There are no peripheral areas, as in many other large residences, which were leased out commercially to ex-slaves of the household or to various shopkeepers.

In the two volumes of the *Codex* devoted to this house, Dr. Warscher emphasized the irregularity of its general layout. She observes that the peristyle does not lie on the same line as the *fauces* (entrance, No. 1 on plan, Figure 2), the *atrium* (court, No. 2) and the *tablinum* (salon, No. 8) but farther north, on a line parallel to it. The tablinum is directly behind (east) of the atrium with its shallow pool (*impluvium*, No. 3), and is closed on its east side, because directly behind it is a *cubiculum* (bedroom), the oldest room in the house. This is in the shape of a double alcove (Nos. 35 and 36). Farther behind were converted service quarters (Nos. 38, 39, 40). Above the double alcove was a second-floor bedroom with a finely tessellated geometric pattern in white upon the black-paved flooring. This room and those adjoining it were probably used as sleeping quarters for the family. It is not easy to believe that rooms as beautifully appointed as this one would have been assigned to slaves, as is generally thought to have been the use of such accommodations on the second floor of Pompeian houses.

Being closed, the tablinum does not provide the tradi-



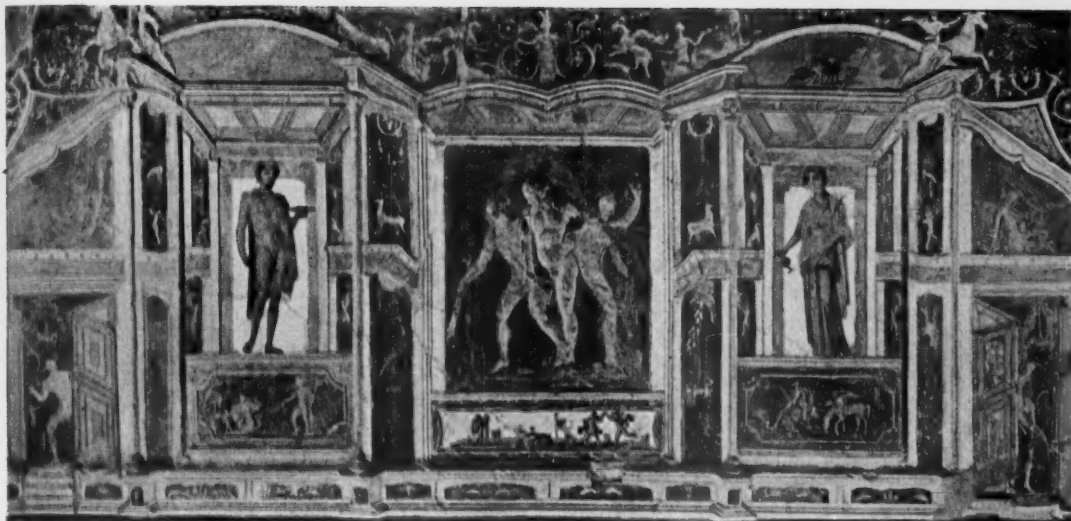
9. The Meleager Frieze: fragment from north wall of the tablinum. Bacchic and other scenes (both painted and in relief) are interspersed among architectural elements. Photo Islay Lyons.



7. The painting of Argus and Io by the Meleager Painter, from the south wall of the tablinum. Photo Anderson.



8. Mars and Venus, from north wall of tablinum: one of the most famous paintings found in the house. Photo Anderson.



10. The Meleager Frieze: This longer section, from the south wall of the tablinum, also has a Bacchic scene and various subordinate panels with figures of *erotes*, griffins, dolphins, etc. Photo Islay Lyons.

## Frieze continued

tional view on to the peristyle or *xystus* (garden, No. 18). Instead, its walls were decorated in a most ornate manner from the floor to the upper reaches, where once was one of the finest stucco friezes in bas-relief found in a private house in Pompeii. This deviation from the usual plan, an agreeable distraction, gives the house its own individuality, enabling it to offer symmetry without monotony, as well as exerting a strong architectural influence over the atrium and its immediate surroundings.

Seeing the tablinum (Figure 3) for the first time, one has difficulty in imagining what it must have looked like before the eruption. Today its walls, for the most part, are bereft of their plaster, and their original height has been reduced almost by half. On the east wall only the naked masonry remains, except for a small vertical patch of stucco in the south corner (Figure 4). Traditionally there was no passage through the tablinum in the conventional Pompeian house, which accounts for the introduction of the *andron*, or passageway, at the side (No. 34, Figure 2). It is clear that originally the tablinum in the House of Meleager was not a closed room, for recently a blocked, vaulted doorway leading to a ramped passage sloping downward in the rear was discovered in the southernmost part of the east wall. In the east corner of the north wall (Figure 5) is a small niche or closet (No. 9, Figure 2) with marks in the ancient wall-

plaster left by wooden shelving. This, apparently, was used for storing the owner's business documents. Upon investigation the niche has also proved originally to have been a door.

THE GREAT FRIEZE (Cover and Figures 9, 10) was originally in the tablinum above the large painting of Argus and Io on the south wall (Figure 7) and its companion-piece opposite depicting Mars and Venus (Figure 8), each composition accompanied on both sides by graceful, flying female figures. The massive stucco frieze must have been the cynosure of all eyes privileged to admire this room. While the two central paintings on the north and south walls were placed in the center of the wall laterally (and undoubtedly this could apply to the unknown central painting on the east wall) they were somewhat raised for easy viewing. This, of course, had a direct bearing on the placement of the flying figures at the side of each of the central paintings.

On the north wall, the side panel to the west, or left of the viewer, still shows faint traces of one of the flying figures mentioned above (Figure 6). The reconstructed drawing of the wall (Figure 11) indicates her importance in the over-all composition. Several of the great nineteenth-century authorities on Pompeian painting were more than enchanted by her: Helbig saw her but made no mention of the great frieze; Reinach commissioned her outlines to be drawn for his *Repertoire*, and Fiorelli noted her briefly in his descriptive work on Pom-

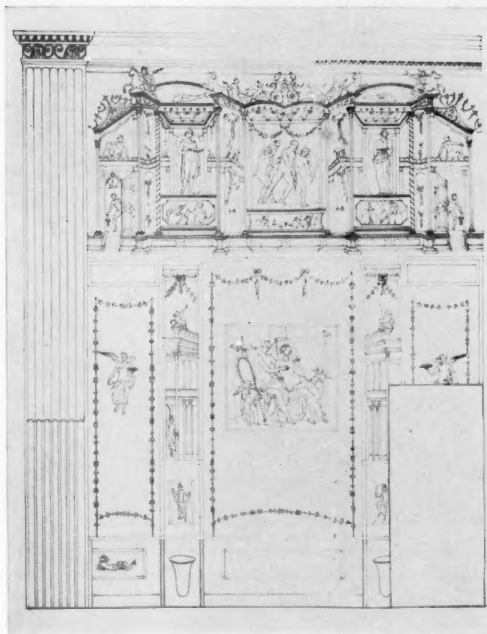
## Frieze continued

peii. Zahn also included her in one of his large folios. East of her on the wall was the fine painting of Mars and Venus by the "Meleager Painter." This and its counterpart are two of very few paintings accurately recorded as coming from the House of Meleager.

As the tablinum was closed, it consequently presented three walls to be decorated instead of two. While obviously there could never have been a central painting on the west where the entrance was, we may not arbitrarily exclude the possibility of a continuation on this side of the stucco frieze in the upper zone, which might have been supported by the lintel. However, in a catastrophe such as the eruption of 79, this section might well have been the first to collapse, supported as it was only by a wooden beam. There is also another consideration which militates against the presence of a frieze on this fourth side. It is possible that this room was, in true Pompeian tradition, appointed with draped curtains cinched to the sides of the entrance by tie-backs. In all probability it was relatively dark within, and consequently the entrance to the tablinum must have been fairly high in order to admit sufficient daylight. Otherwise the detail of the bas-relief so far up in deep shadow could not have been clearly seen. In view of this, we are not inclined to believe that there was a continuation of the frieze over this entrance.

The lofty position of the frieze did not conform to the taste of the excavators in 1829 any more than it does now to ours. From detailed studies we have concluded that its unusual placement suggests that this type of decoration had only recently come into vogue. In Pompeii it was probably "le dernier cri" in artistic fashion. Emily Wadsworth, in her work on Roman stucco relief (*Memoirs of the American Academy in Rome*, Vol. IV [1924]) points out that the purpose of using stucco was to secure effects of light and shade which its plastic qualities make possible. Only in the public baths near the Forum and in those close to the *quadrivium* (the crossing of Pompeii's two main streets, the Via Nola and Via Stabia) have there been found comparable examples of this type of stucco decoration. Very possibly the owner of the house had only one area available for this frieze, namely the tablinum. And high up on this lofty perch it went.

It is likely that the frieze was the creation of one of the itinerant painters of the Campania. How penetratingly fresh the colors are! We may never know this artist's identity, but in time we may attribute to him the stucco bas-relief in the Stabian baths. Eventually we may also be able to link his work with the frescoes in the *palaestra privata* (private gymnasium) which over-

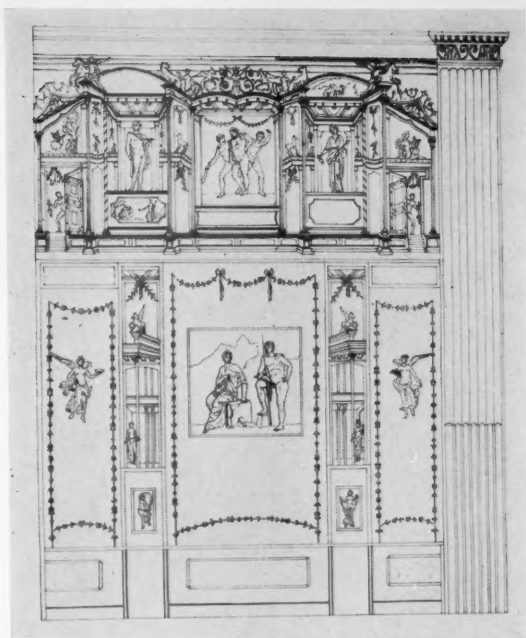
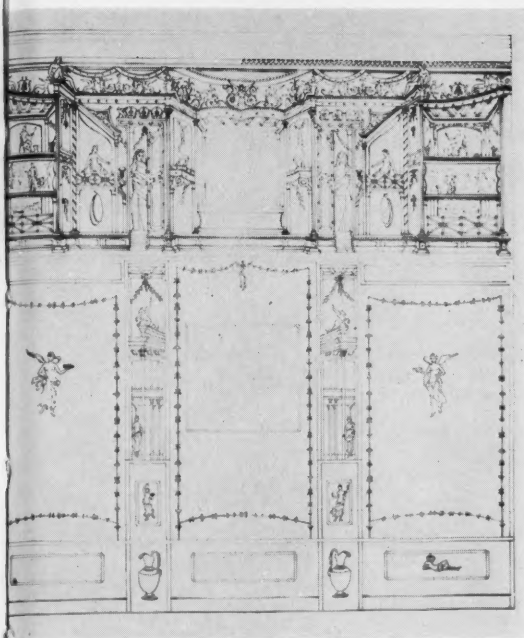


looks the southern periphery of the city. In creating the Meleager frieze, however, the artist concentrates his interest on form; movement is comparatively neglected. Somewhat awkward, and limited in ability, he does not retain in his work the tactile qualities of the Greek masters who preceded him in the Golden period of Pericles. Yet, all the while, the artist paints what he cannot hope to realize, his dream of surroundings where his soul may feel at home.

After many months this room has been reconstructed on paper by Dr. O. Cappabianca under our commission and direction. The three walls of this distinguished Pompeian tablinum are now shown, for the first time, in all their magnificence (Figure 11).

The renowned work, *Pompeianarum Antiquitatum Historia* (Volume II), includes only the two central paintings (Figures 7 and 8). The third painting, on the east wall, has never been seen in modern times. In all likelihood the east wall collapsed as a result of the destructive haste in excavating during December 1829. Although the former two paintings are mentioned and the frieze over them is here described but not identified, there was a third section which ran above the missing painting on the east wall (see Cover). The reproduction of this section in *Real Museo Borbonico* (Vol. X, Plate XLIII) is most important, because, being the only illustration of the frieze, it provided Tatiana Warscher





11. The walls of the tablinum reconstructed. *Left*: north wall; *center*: east wall; *right*: south wall. Drawings by O. Cappabianca.

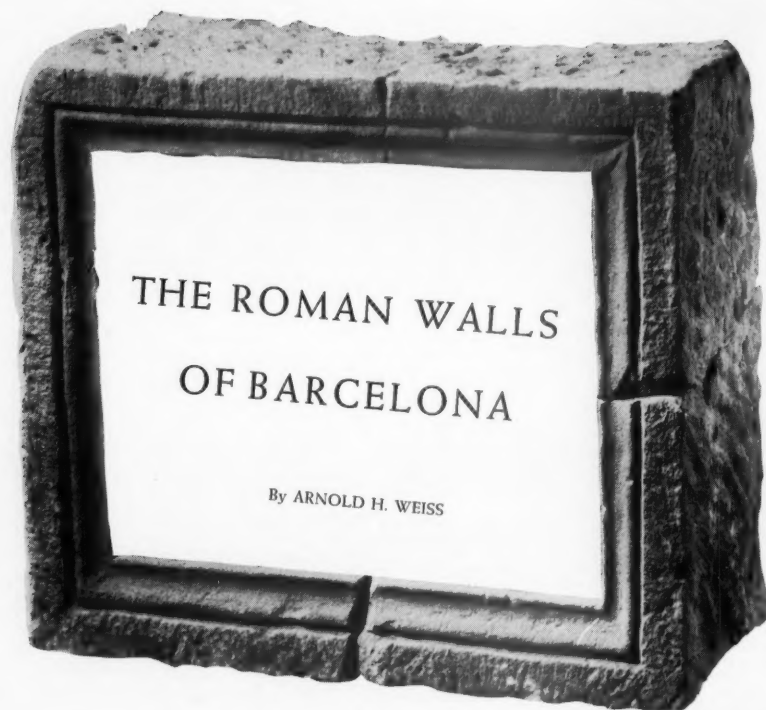
a lead in her search for other fragments. We have only to note the treatment and composition: the loggia, the opened door, the stairs and the griffins at the top. They are all there, alike in each of the three panels. By careful analysis and measurement it has now been deduced that this third section of the frieze once graced the east wall, directly above the small patch of plaster that is still to be found on the southern portion of that wall. This deduction was not easily attained, because the fragment involved is the smallest of the three, while the east wall of the tablinum is the longest.

ONE OF THE MANY DIFFICULTIES confronting archaeologists at Pompeii is that errors made in the nineteenth century ceased to be questioned over the years and gradually received general acceptance. For example, though the frieze was mentioned by many famous archaeologists, Overbeck, in the later editions of his *Pompeii*, made a grievous mistake in inferring that it had disappeared long before and was to be considered lost. In his fourth edition (1884), which was edited and added to by Augustus Mau, the frieze is not identified. Mau merely referred to it as a "rich frieze" and asserted that it had "vanished." Mau did not observe Overbeck's mistake and gave credence to its reported disappearance. This, of course, led to considerable confusion and misunderstanding, and the archaeological world no longer associated

these three fragments with the walls of the Meleager tablinum.

Concurrent with the work undertaken in connection with the Meleager frieze, research has brought to light paintings which graced the walls of the atrium and the peristyle. There has also been uncovered a veritable labyrinth of foundations of earlier houses together with water channels which, we believe, were in use for over a hundred years, right up to the final day of catastrophe. Another find is a bronze foundry in the house to the north, which may be clearly associated with an earlier proprietor of the House of Meleager. This fact has been established by the very recent discovery of a subterranean room in the northeast corner off the peristyle which very likely was used as a storage room for the foundry, and thus provided a commercial access to both houses. These and other finds will be the subject of further articles.

THE AUTHOR'S interest in Roman civilization was stimulated during undergraduate years at Yale University (B.S. 1935) by the great Professor Michael Rostovtzeff. Going to Italy in 1957, Mr. VanderPoel has since been actively concerned not only with archaeological investigations but with restoration projects of various sorts. He is at present preparing a book on the House of Meleager which was initiated in collaboration with the late Dr. Tatiana Warscher. Working with him on this project are Italian, American and British specialists. For assistance received in connection with this article he wishes to thank his wife, Mr. David G. Jeffreys, Mr. John Dimick and Miss Joan McConnell.



IN IMPERIAL ROMAN TIMES Barcino, now Barcelona, was a large city, in population and presumably in area. Just how large in area no one will yet venture to say, for at first the Romans apparently built no permanent defences. They had, in fact, no reason to. All Mediterranean Spain had been thoroughly pacified for centuries and was completely Romanized. The defences of Barcelona were in Germany, along the frontiers of the empire. These defences were seriously breached during the troubles of the mid-third century, but Barcelona and her sister cities of the Catalan coast had supreme confidence in the emperor's ability to stop any invader far short

of Spain. They were very wrong. For around A.D. 260-270, with a suddenness that must have been paralyzing, Barcelona found herself overrun by a wave of barbarian raids. Franco-Germanic invaders, pressing through Gaul, swept down the Mediterranean coast all the way to Tarragona, sacking cities as they went. But the wave of violence quickly subsided and the marauders withdrew, to be effectively kept in check by the imperial legions. This gave Spain and the empire a breathing spell, and Barcelona took advantage of her reprieve to construct a strong city wall with the greatest speed possible as insurance against another disaster.

*Figures 1-4, 6 from A. Florensa Ferrer, Las Murallas Romanas de la Ciudad; Figures 7-15 from F. Ribera, courtesy of J. de C. Serra-Ràfols.*

THE ROMAN WALLS OF BARCELONA have always been known, and they have been explored at intervals for over a century. The modern history of their excavation

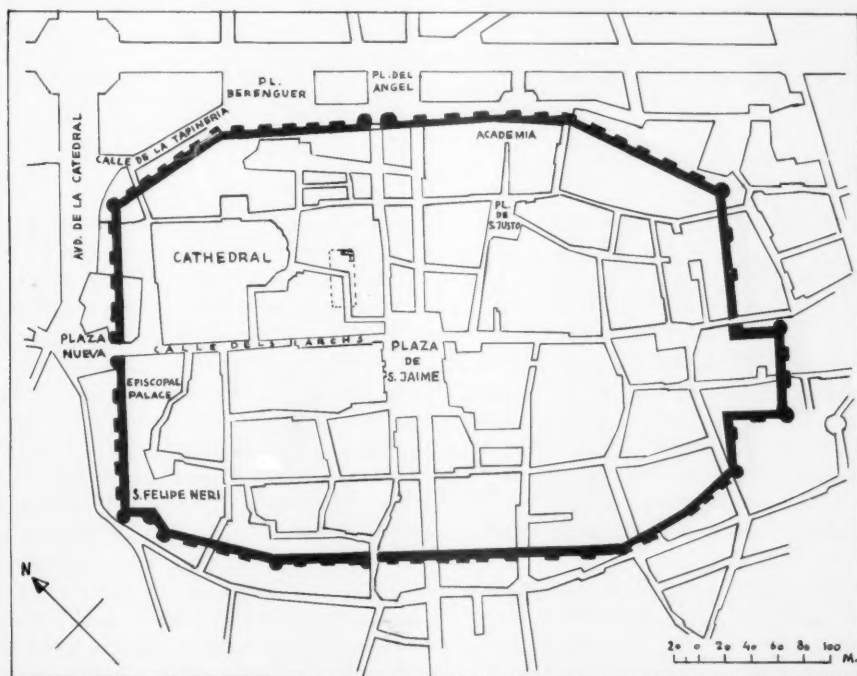
goes back to 1840, when the first tentative probes were started under the sponsorship of the Chamber of Commerce, and in 1849 a search was begun for a gate in the wall at the place where it flanks the Plaza del Rey. Seventy years more passed before anything else of consequence happened. In 1920 the new Director of the Historical Archives of Barcelona, Don Agustín Durán y Sanpere, was authorized by the municipal government to undertake whatever investigation he considered necessary to throw light on the city's history—a commission unfortunately not accompanied by the funds to carry it out. Then in 1929 the city fathers, in a glow of euphoria over the coming International Exposition to be held in Barcelona, gave him the money to go ahead. Dr. Durán chose to work along the side of the Plaza del Rey. He got a good look at the wall in that campaign, and his description of it was our first really accurate one. The Civil War of 1936-1939 of course brought excavation to a standstill. Work resumed in the early 1940's, but on a much reduced scale. Finally, in 1957, a really ambitious program got under way, this time as a joint venture of the municipal corporation and the Archaeological Museum of Barcelona. The plan is to free the wall where it survives above ground level, and elsewhere to

excavate along and below as much of its circuit as possible—a difficult task, for the wall is now in the heart of a busy city.

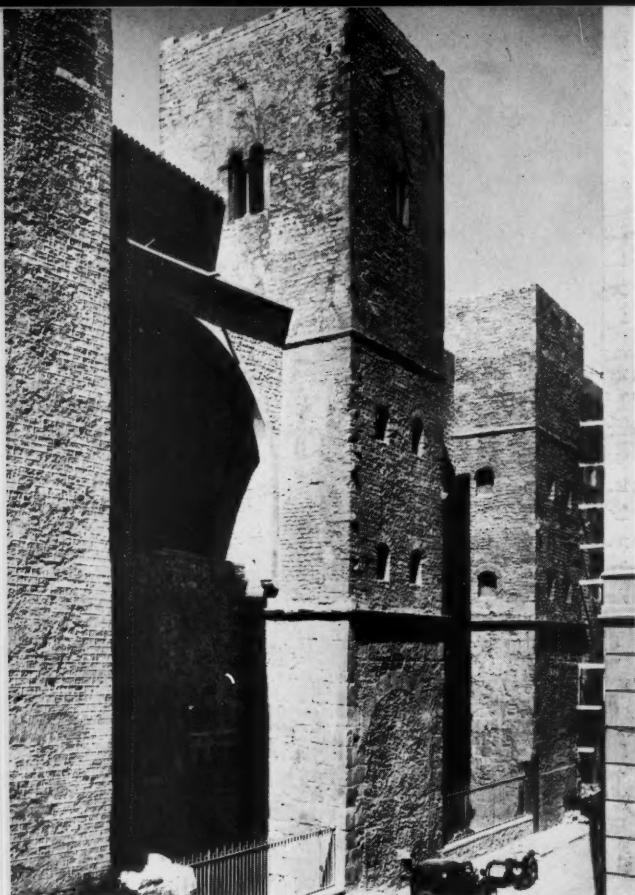
As far as can be determined today, the citizens of Barcelona, when they set about constructing a wall in the third century, greatly contracted the limits of their city. We have no information on how far the earlier city extended beyond its central nucleus. Here are the facts—or what we think are facts—that we had to go on until recently.

Those who maintain that Barcelona was originally much larger say that it must have been larger just to accommodate the great population it is supposed to have had. This is logical though not yet provable. Presumably the worst damage resulting from the raids was to the outlying districts of the city; this plus the fact that there must have been numerous casualties made it simpler merely to leave the wreckage outside and enclose the reduced population within a smaller circumference. There is fairly general agreement on these assumptions; one objection will be discussed later.

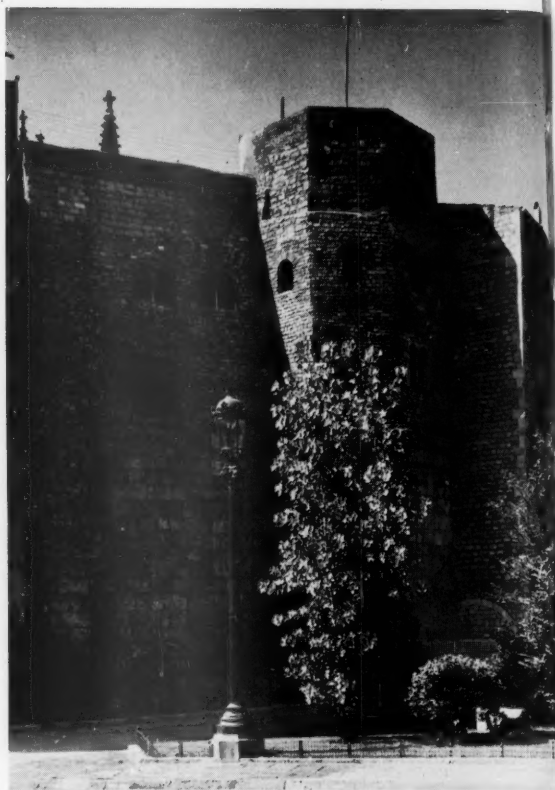
The area around which the survivors of the raid constructed their new fortifications was small, only some 500 x 320 meters. Its shape was irregular: a



1. Barcelona: plan showing the Roman walls and the main streets.



2. Tower near the Plaza del Ángel. The third story is a mediaeval addition. The Academia de Buenas Letras is directly behind the wall at this point.



3. Octagonal tower which stands at the intersection of the Calle de la Tapinería with the Avenida de la Catedral. Similar towers are found elsewhere in the circuit.

## Barcelona continued

rough rectangle with the corners lopped off. Its principal axis ran in a northwest-southeast line (Figure 1).

THE CONSTRUCTION was along Trajanic lines rather than those of the more advanced Aurelianic wall at Rome, which was contemporary or perhaps a bit earlier. The outer face is made of large rectangular blocks averaging  $70 \times 50 \times 60$  cm. The material is sandstone, most of it from the quarries on Montjuich, a hill on the coast a little southwest of the city. Two meters behind this outer face the defenders built an inner face of much smaller blocks, of the type widely used in earlier imperial construction. The stones were carefully fitted together, especially at the base. They were also joined by mortar, which has largely disappeared except around the foot of the wall, where it was protected by accumulated debris. The wall reached an average

height of ten meters. The space between the two faces was filled with a mixture of stones, fragments of wrecked or abandoned monuments, earth and rubble, compacted with a sort of concrete.

The fact that the foundations of the wall are shallow and that the citizens hurriedly threw into the fill between the two faces many items they usually would not have sacrificed shows that they felt they were working against time. As it turned out, there was plenty of time: in its moment of crisis the empire had found the needed strength. As a result the builders in Barcelona could draw a deep breath and do the job properly. During a second phase of construction the wall, until then only a temporary stop-gap, became a permanent fortification system. It was enormously strengthened by the addition of a new face identical to the original one in height and thickness and made of the same large sandstone blocks. This brought the wall's thickness to about four meters,





4. Semicircular towers in the Plaza Nueva as they appeared before the demolitions of 1957-58.

approximately the depth of Aurelian's wall. As in the original wall, the new space was filled with a mass of rubble and concrete.

Even more impressive than the doubled thickness of the wall were the towers which were added at the same time. It is nearly certain that there were seventy-two in all. These were definitely not built in a hurry. They project from the walls, set on deep foundations, at one point something like 1.80 m. below present ground level. This foundation was itself set on a wide base or footing. The towers are rectangular (6 x 4 meters). Up to the height of the wall they are constructed of the same type of large sandstone blocks as is the outer face, and are filled with the usual mixture of rubble and abandoned architectural elements. At the level of the top of the wall was a narrow cornice above which each tower continued upward for another seven meters, but now hollow and square in plan (6 x 6 meters), supported partly on

its own base and partly on the wall itself. This upper part, made of stones like those of the inner face of the wall, was in two stories, the lower story having six windows and two doors, leading to the sentry walk, while the upper story had eight windows, two on each side. A molding consisting of two rows of heavy brick ran round the top of each tower. Nearly all the surviving towers are now higher than when originally constructed—the result of mediaeval alterations (Figure 2).

There are a number of exceptions to the normal tower plan, all at openings through the wall or at places where it changes direction. For example, near one corner of the cathedral façade, where the wall turns a forty-five-degree angle, there is an octagonal tower (Figure 3). On the other side of the cathedral the wall does not turn a corner, but there is an opening in it flanked by two towers. These are much closer together than is normal, indicating that the opening always existed there.

## Barcelona continued

The towers are semicircular in plan (Figure 4), and with good reason. The street which pierces the wall here is now too narrow for vehicular traffic, but it is still an important pedestrian thoroughfare and surely always has been. The rounded-off towers made room for a marketplace and for traffic as well as for military maneuvers; if necessary, it would give defenders on the fortifications an unimpeded field of fire. This is exactly parallel to the situation at the Porta Pinciana in Rome.

In reality, only one of these two towers—the one farther away from the cathedral—is truly semicircular; its mate is not. Instead, the curve of the semicircle is cut off about halfway around the arc from the gate. The reason for this has only recently become clear. The 1957-1958 campaign uncovered the remains of one arch of an aqueduct which had once paralleled the street. The aqueduct seems to be at least a couple of centuries earlier than the wall. The builders of the wall respected the line of the aqueduct and stopped the tower where it met the arch, then filled it in. This buttressing saved the arch; all the others are gone. But a number of the bases on which they rested survive, crossing the Plaza Nueva and following the line of the street leading from it—appropriately named the Calle dels Archs, or Arch Street (Figure 5).

Considering the line of the wall as an ellipse, we can say that the southeast quadrant is the best preserved. A recent discovery here may mark the most important new development in our knowledge of the ancient city. As was suggested earlier, it has always been taken for granted that first and second-century Barcelona was considerably larger than the city enclosed within the third-century walls. Another theory maintains that since fragments of large funerary monuments have been found in the fill, and since cemeteries were always outside the built-up area, the earlier city must have been smaller, not larger, than the later one. But a recent discovery by Dr. José de C. Serra-Ràfols, who is directing the excavation of the walls, gives contrary evidence. Digging in the patio of the Academia de Buenas Letras, Dr. Serra found, at a depth of some three meters, a wall running at right angles to the city wall and intersecting its inner face. This is undoubtedly a lateral wall of a building older than the city wall, which cut it off. From its position just inside the walls it is apparent that the building was an important one and as such unlikely to have stood outside the old pre-invasion city. All this is not yet clear, but it does seem to confirm the theory that the old Barcelona was larger than the new.

In the northwest and southwest quadrants a scant thirty per cent of the city wall remains standing; nearly

half of that is the section which extends southwest from the two semicircular towers. Beyond the gate the wall flanks first the Episcopal Palace and then the headquarters of the Fathers of San Felipe Neri. Though only fragments remain here, they are easily visible if one climbs to the roof and looks down between buildings and into interior patios. The most prominent survivors are several towers whose square shape is still recognizable despite centuries of remodeling and rebuilding.

In the remainder of the northwest and southwest quadrants the fortifications, where they survive, still lie buried between the walls of houses and shops. A few sections are now exposed to view inside buildings, giving the places a certain antiquarian interest. The owners of one shop underwrote the cost of exposing and displaying a good section of one of the towers which graces their property, and changed the name of their shop to "La Torre Romana." A tavernkeeper went into business in a tiny space backed by one of the towers and announced a contest for the best name for his establishment; the winner: "Bare Nostrum." But excavation and serious study are still some years away.

THE PRESENT CAMPAIGN has concentrated on the northeast quadrant, the area dominated by the cathedral. The wall ran directly in front of where the cathedral now stands. It was here that the campaign began in 1957. A line of apartments and shops was demolished, revealing an almost completely intact stretch of wall and two towers. The only change here, other than the usual increased height of the towers, was that the mediaeval Casa del Arcediano (now the residence and office of Dr. Durán) was built along the inner face of the wall and extending above it; this now forms a handsome backdrop to the wall. Ancient and mediaeval styles complement one another here where walls, residence and cathedral all overlook Barcelona's Plaza Nueva (Figure 6).

The 1959 campaign was concentrated in the Calle de la Tapinería, which bounds the cathedral on the northeast and which once contained nineteenth-century and earlier buildings. By the spring of that year all these were down to ground level except the one housing the Museo Marés, which will remain. The principal work was carried on in an area about fifteen meters wide, west of the museum. The houses here were built directly across the line of the wall and did not merely abut against it as in most other places. This has meant the complete destruction of the wall above ground level. Below that, however, the situation changes.

Just below the present street level Serra found a section of a quite different wall, constructed of so-called cyclopean masonry, somewhat on the order of the lower courses of the walls at Tarragona and Ampurias. Its



5. Remains of the Roman aqueduct in the Plaza Nueva. The pillar at the right and the arches springing from it are modern.



6. The ensemble in the Plaza Nueva as it appears today: the Cathedral, the Casa del Arcediano, the wall, towers and the restored arch of the aqueduct.



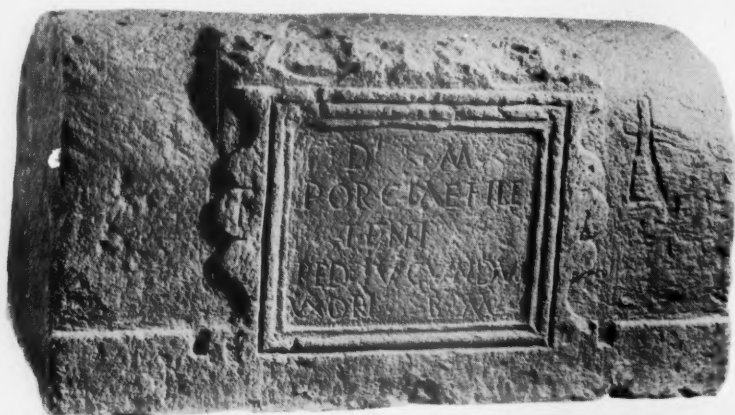
7. Excavation going on in the Calle de la Tapinería, March 1959. The marble head of the younger Faustina, recently uncovered, lies on the ground in the center of the photograph.



8. Altars and column fragments in the Calle de la Tapinería. All are *in situ*, but the altar in the background has been rotated to show the inscription.



10. Column from a funerary monument. From the Calle de la Tapinería.



9. Casket-shaped gravestone (*cupa*) with incised axe-head. From Calle de la Tapinería.





11. Gorgon's head, part of a mausoleum. Discovered in the Calle de la Tapinería.



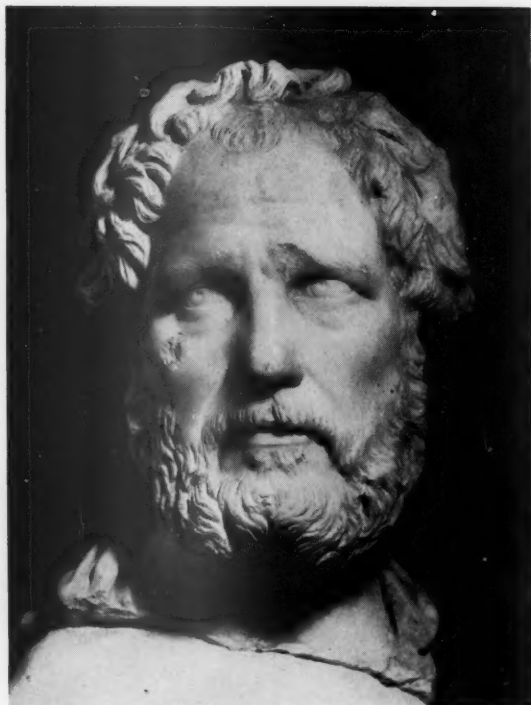
12. Inscription of the early second century which has been provisionally assigned to the mausoleum (see Figure 11). Found in the Calle de la Tapinería.



13. Statue of Diana, from the Calle de la Tapinería.



14. Head of the younger Faustina, daughter of Antoninus Pius, excavated in the Calle de la Tapinería (see figure 7).



15. Portrait bust of the emperor Antoninus Pius (A.D. 138-161), found in the Calle de la Tapinería.

## Barcelona continued

foundations are shallow; the little of it exposed so far suggests pre-Roman origin, perhaps Iberian. It extends the full fifteen-meter width of the 1959 excavation, crosses under the museum and reappears beyond it. It seems possible that after the raids, when the limits of the city were contracted, the authorities chose to build their new wall along the line of the earlier one, whose base at least still existed. This would have made particularly good sense when they were building in a hurry. The exact relationship between the two walls is still unclear, nor has the cyclopean wall yet been dated. And the rest of its circuit is still a mystery.

To get at the remains below ground level it was necessary to cut through a considerable overlay of modern foundation; in addition, the fill itself was very solidly compacted. This made for a noisy dig, with pneumatic drills yammering away much of the time—a sort of infernal dentistry on a monumental scale (Figure 7). The operators were sharp-eyed and light-handed, however. Almost never was a find more than scratched, and there has been only one case of serious damage since the campaign began in 1957.

Votive altars are frequently found and cover a fairly wide spectrum of artistic achievement, although so far there is no elaborate decoration nor esoteric funerary symbolism. Two altars found intact provide a good example of how the wall builders appropriated monuments for construction material and tossed them in to form the fill (Figure 8). Closer inspection of the numerous altars found shows that many of them carry a curious axe-shaped sign; many other funerary pieces have one somewhere on their surface (Figure 9). Its exact significance is still being debated; theories run from a stonemason's mark to an insigne of a burial society or a cult symbol.

Regarding the altars, it would be tempting to speculate on a decline in quality as the third century advanced, although the economic status of the families involved may actually have had more to do with it. Serra has noted that we really know practically nothing about the layout of the city before the third century, although we are almost embarrassed by the number of inscriptions from that period. On the other hand, as he says, monuments from the fourth century on are preserved, chief among them being the wall itself; yet there is not a single inscription safely datable after 300. It is almost as if the population had suddenly lost the ability to read and write.

Three column fragments found with the two altars (Figure 8) are typical of many discovered in the wall, with the scale pattern characteristic of funerary architecture. Another large fragment of a column, which

carries an interesting reference to contemporary building techniques in the heavy rope border and in the lighter ropes tied in a knot, shows that not everything in the cemeteries was as crude as are some of the altars found (Figure 10).

Three large matching architectural members with Gorgon heads have turned up whose form suggests that they were corners of the frieze of a rectangular mausoleum (Figure 11). They have been tentatively reassembled, and along with them has been placed a large, well cut inscription mentioning a man who might have had such a monument. The history of the three legions in which he served—III Augustalis, XXX Ulpia Victrix and VII Gemina Felix—dates the inscription to the early second century (Figure 12).

The corpus of inscriptions continues to grow; the total for the whole campaign in the Calle de la Tapi-neria has already gone well beyond one hundred.

All but a few of the finds are funerary, almost all are of local stone or the typical reddish Tarragona stone, and most of them are surely of local or at least provincial origin. But a few other interesting pieces have turned up, proving that not only funerary monuments were sacrificed, and confirming the atmosphere of crisis in which the wall was built. One is a Diana of Italian marble, a little on the muscular side (Figure 13). The back is unfinished, indicating that the statue stood in a niche in some shrine or temple. A base for a statue of Diana (though probably not this one) was found some years ago not far away; it suggests the existence of a temple to Diana and Augustus from which this statue may have come. A head of the younger Faustina represents her as a young girl but already with her characteristic hairdress (Figure 14). The prize so far is a head of Antoninus Pius, found near that of his daughter. Both are of Italian marble and life-sized (Figure 15). The emperor is older here than in some of his other portraits; his hairline has receded and he looks a little weary. But there is a thoughtfulness about the expression that is especially appealing, and a gentle firmness in the profile which might be called typically Antonine. It is a worthy example of imperial portraiture, one that strikes an appropriate note on which to close a description of the Roman walls of Barcelona, which are tardily but steadily yielding up their secrets.

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THE AUTHOR is Assistant Professor of Romance Languages at the University of Kansas. He received the B.A. degree from Western Reserve University, the M.A. and Ph.D. from the University of Wisconsin, where he taught before moving to Kansas. Dr. Weiss' study of the archaeology of Spain stems from his wider interest in Hispano-Roman history and civilization. He has traveled extensively in Spain and has worked with the staff of Barcelona Archaeological Museum.

# Recent Discoveries in





# Northern Panama

AS ONE STUDIES THE MAP of lower Central America, one sees that a spur extends from the higher mountains which form the backbone of the narrow Isthmian area. This spur, known as the Talamancan Mountains, angles upward toward the north in the region of the boundary between Panama and Costa Rica. As the main ridge of mountains continues down to the southwest, one encounters the highest peak in Panama, El Volcán de Barú. The triangular area between these two mountain ridges and the sea contains the headwaters of several rather large rivers. The one with which we are concerned is the Río Changuinola, which originates immediately north of El Barú. This river drains into the Caribbean Sea a short distance north of the Bahía del Almirante, named after Christopher Columbus. This area, the northernmost province of the Republic of Panama, is named Bocas del Toro. The rainfall in this province is legendary; it is claimed that there is no dry season here, only a wet season. However, there is often a short dry period about October, but when and if this will occur is not always certain. Because of the heavy rainfall there is much cultivated land along the coast and the lower elevations. The United Fruit Company has its banana plantations up and down the coast and along the river valleys. Farther up these rivers and streams are located the "fincas," the ranches and farms of the small landholders. Behind these pioneers are the "tame" Indians, direct descendants of the former fierce, head-taking Indians who lived in this area before the time of Columbus.

Beyond the Indian habitations the topography becomes increasingly rugged. The rivers dash through deep canyons from whose edges the land rises abruptly to steep and narrow ridges. These, in turn, continue to rise until the hills become mountains. Covering this inhospitable highland territory is virgin jungle in which today, in spite of the great quantity of game in the forests and fish in the streams, there are no inhabitants. That at one time people lived in this area is suggested by tales of hunters, who have encountered mounds pro-

tected by gigantic and ferocious-appearing statues of stone. There are also indications that cultivation was carried on here, for stands of sisal (used for fiber) and clusters of pejibaye palms (used for food) have been found. Although there are no trails nor any traces of the homes of the former inhabitants, some of their burials have been discovered. Just who these people were is conjectural. The Bribri, who live at the headwaters of the Sixaola River, may have extended to this region as well. It is more probable, though, that members of the Talamancan branch of the Guaymí Indians lived here, and that the Changuenas and Dorasques occupied the area from time to time. The home of the Dorasques was Chiriquí, so it may well have been they who introduced the elements of the Classic Chiriquí culture which are found here. These groups warred with each other for the usual purposes: obtaining trophy heads and victims for sacrifice, and winning prestige.

It is known that even in late historical times the chiefs and major warriors of the Bribri wore golden pendants. As similar tomb and cist burials, together with similar artifacts, exist in other Guaymí areas, it must be presumed that the Guaymí of this area had a similar material culture and mythology. It is most likely that the basic tradition represented by all of these peoples is Chibchan, that is, they were part of an early return migration from South America, particularly from the central Colombian highlands surrounding Bogotá.

At the present time information regarding the artifacts retrieved from burials in this area is limited. In fact, the province of Bocas del Toro is virtually unknown from an archaeological viewpoint. While Columbus mentioned "*espejos de oro*" from the north coast of Veraguas (which at that time included Bocas del Toro) during his fourth voyage in 1502, there has been only an occasional mention of Bocas in archaeological literature.

For over one hundred years the world has been hearing of the tremendous gold finds in the *huacales*, or graveyards, of Bugaba and Bugavita in the province of



1. *Left*: Gold eagle from Bocas del Toro. Note the collar and the small feet projecting forward. Height 6.5 cm., weight 30 grams. *Right*: Tumbaga eagle with bells as eyes. The design along the lower edges of the wings probably represents the primary wing feathers. Height 8 cm., weight 57.5 grams.

## Panama continued

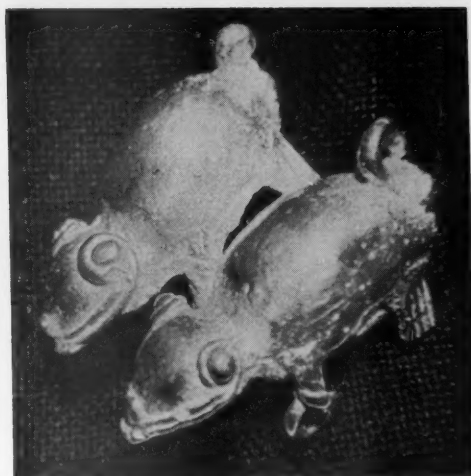
Chiriquí. Countless other rich sites have been plundered throughout other parts of Chiriquí. However, no one appeared to find much material across the cordillera, in the province of Bocas del Toro. Recently I had the opportunity to view a collection of gold artifacts and a few associated objects which came from the central highlands of Bocas del Toro, on the Río Changuinola and above its tributary, the Río Ururí (three to four thousand feet above sea-level). None of the available charts is sufficiently accurate to place the site with certainty. The majority of the associated artifacts were left behind, as they were too bulky to carry and in most cases had been "killed" (i.e. broken, so that the spirit of the object might accompany the spirit of the deceased on his journey into the unknown), making it impractical to carry them out on the *buaquero's* back for the four or five-day return journey to civilization. Some of the artifacts which were brought out tend to indicate a blend of highland Costa Rica and Classic Chiriquí cultures. They also contain a few elements formerly known only from the valley of the Río Grande de Térraba. Some of the pottery which accompanied the jewelry has well executed painted and modeled motifs reminiscent of the Classic Chiriquí. Some of the gold is also similar to the gold relics found in Chiriquí, as well as those from southern Veraguas. There is also stone sculpture similar to that shown in the material

from the Mercedes site, in Costa Rica. That the gold artifacts of this region were carried by trade to distant areas is proved by the discovery of many such items in the cenote of sacrifice at Chichen Itza in Yucatan. The Mexican tribes had contact with this area before the Conquest, as is indicated by the known fact that tribute-seeking groups of warrior-merchants were in the area around the present Costa Rican-Panamanian border at the time of the fall of Moctezuma.

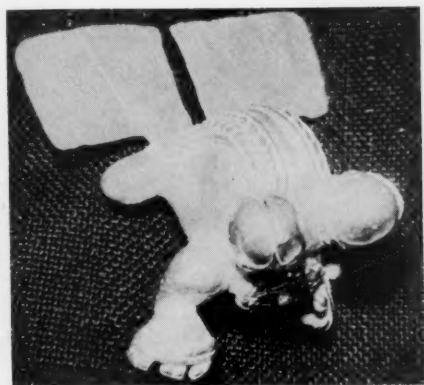
The gold-working techniques are the same as those seen so commonly in the provinces of Chiriquí and Veraguas and the Isthmian area in general, and are well described elsewhere. Some of the gold is of very good grade; other articles contain a considerable amount of copper. *Tumbaga*, or carbon gold, is also present. All the artifacts are hollow cast, that is, the backs are open. To date, no copper artifacts have been found, although they are known to occur in Chiriquí. The custom of "killing" the object buried with the dead is evident and has been carried out thoroughly in some cases. This applies to the pottery and stone as well as to the gold. The majority of the suspension rings do not show wear, indicating the probability that these rich artifacts were manufactured as burial offerings only. A large number of the golden offerings are bells, containing pellets in a hollow created in the eyes or body cavity.

THE FIRST TWO GOLD OBJECTS we show (Figure 1) represent a bird, whether eagle or parrot or some other

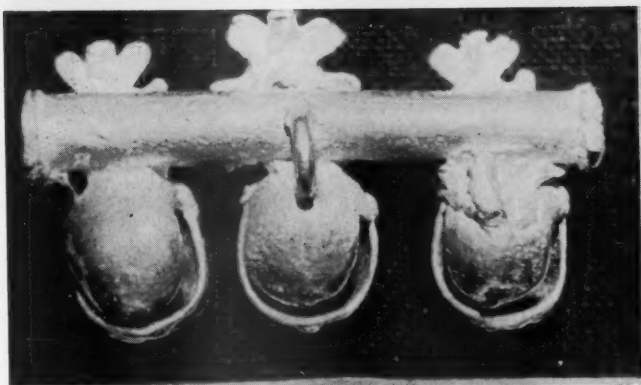
2. Gold effigy of a tigre. Length 3.5 cm., weight 17.5 grams.



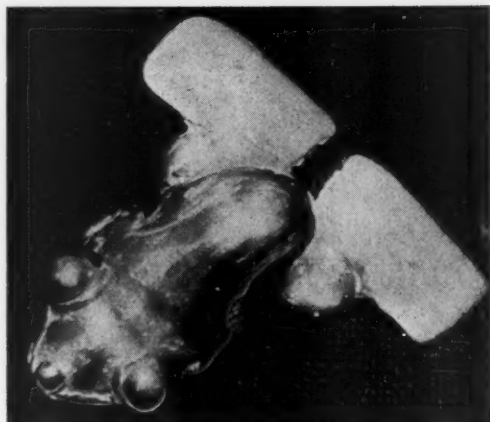
3. Paired gold conejos, with suspension rings in the front paws of each animal. Length 3.7 cm., weight 22.5 grams.



5. Unusual frog effigy of fine gold from Bocas del Toro. Weight 30 grams.



4. Front and back views of a tubular gold ornament with three heads surmounted by three birds. The back view shows the hollows in the heads and the large suspension ring. Length 6.2 cm., weight 63.5 grams.



6. Gold frog similar to those found in Chiriquí and Veraguas. Length 3.6 cm., weight 15.5 grams.



7. Double effigy of a mythological creature. This is the largest and heaviest piece in the collection. Width 8.3 cm., weight 93 grams.

## Panama continued

mythological creature is unknown. The figure at the left is of bright yellow gold, while that at the right has a higher copper content, giving it a reddish color. It has a carbon core and is therefore known as *tumbaga*. This subject is the most common one known from the Isthmian area. It may represent the Huacamaya, or sacred bird, which was sacrificed to appease the deities. According to Chibchan tradition, if a parrot or parakeet were taught to speak a few words, then it could become as satisfying a sacrifice to the gods as would a human sacrifice, thus sparing a human life.

The object in Figure 2 is a naturalistic effigy of a jaguar, or *tigre*, as it is called locally. It is yellow in color, which shows that it is made of a very good grade of gold. Figure 3 most likely represents two animals known locally as *conejos*. It is of good quality gold, a fine yellow in color. At one time there may have been a structural element between the animals' mouths.

One of the most interesting items in the group is shown in Figure 4. Three birds are sitting on a tube from which hang three heads. The heads, which are hollow and contain pellets so that they ring like bells, probably represent trophies, for the tribes of the region customarily took the heads of their enemies. This piece is of very fine gold and is very well executed. It resembles some of the long tubular beads found in the Coclé and Veraguas provinces of Panama, but obviously the tube was not meant to be used as such because there is a suspension ring on it.

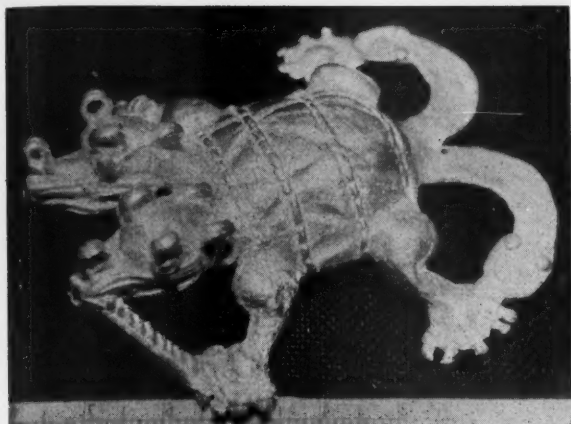
Figure 5 shows an unusual frog effigy of a very fine

yellow gold. Whereas frogs are rather common among the pre-Columbian artifacts of the Isthmian area, this one has an unusual crouching position. Its eyes are bells. The face is vertical and the mouth is outlined by a braided band. Two parallel bands run along the back. Their leaf-like design is probably meant to indicate the natural pattern of the skin. Figure 6 shows a type of frog effigy more common in the Isthmian area. This is also of a yellow color, indicating the use of relatively pure gold. What animal is represented in Figure 7 cannot be determined, but each head is surmounted by a sort of crest, creating an appearance not unlike that of the large lizard called iguana, a well known epicurean delight on the Isthmus. The double-headed snake motif appears in the tails of these monsters. Each body cavity is a separate bell.

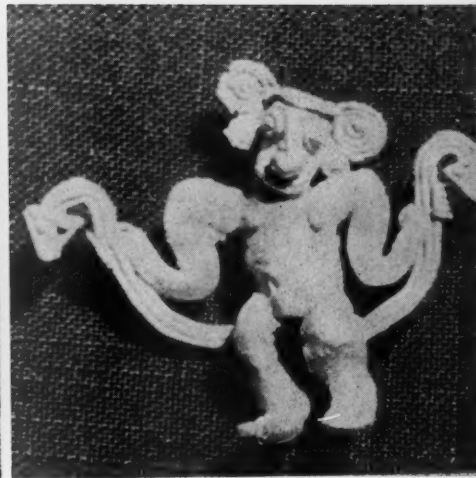
Figure 8 shows the most magnificent item in the collection. It seems to represent a two-headed, two-tailed turtle. The body is a single bell. The gold is exceedingly fine and the workmanship is exquisite. There are suspension rings at the ends of the front legs. A twisted bar runs from each side of each head to the front paws, serving to strengthen the object. The snake element appears again in the double tail.

Anthropomorphic effigies are shown in Figure 9. The one on the left, the simplest, is of high-grade gold and shows several interesting features. A headdress is accompanied by whorls which possibly represent large ear spools. There are no other indications of dress. The male genitals are realistically portrayed. The limbs are greatly out of proportion to the body; the arms are very small, whereas the legs and feet are exaggerated.





8. Double-headed turtle effigy, with snake tails. This is the finest object in the collection. Length 6.2 cm., weight 87.5 grams.



9. *Left:* Gold anthropomorphic figure. Height 4.3 cm., weight 19.5 grams. *Center:* Tumbaga figurine with two figures on its shoulders. The figure has been broken. Height 11.2 cm. *Right:* Gold figurine in the form of a deity holding a double-headed snake. Note the elaborate headdress. Height 4.6 cm., weight 30 grams.



10. Naturalistic clay effigy of an armadillo in the Classic Chiriquí Alligator Ware. The colors are red, cream and black.

## Panama continued

The feet have been drawn out by hammering, a process commonly used by Isthmian pre-Columbian metal workers. The figure in the center is a monstrosity which appears rather frequently among the tumbaga pieces from Chiriquí. The object, reddish-yellow in color, illustrates the use of the process (*mise en couleur*) of purifying the surface gold by dissolving out the impurities (mainly copper) with acids. This two-headed anthropomorphic creature has its genitals represented by a frog, probably a fertility symbol. A tail encircled the body, much like that shown in the two smaller figures perched on the shoulders of the larger one. There is a large suspension ring in back. The object on the right in Figure 9 is a zoomorphic or anthropomorphic deity in which the dou-



11. Clay stool with four nude figures holding up the edge. The surface has an orange-red slip.



12. Stone object consisting of a container supported by two feline figures. Its exact use is unknown.

ble-headed snake motif is again seen. The headdress is elaborate and has ear whorls. This image has a bell in its body cavity. It had been "killed": when found, the head and feet were jammed into the body cavity, while the upper limbs and the snakes were bent forward across the front. The fact that it could be restored so well, without soldering or other artificial means, speaks for the purity of the gold.

Gold pectoral disks were also found, three thus far with the material from this area. They are very heavy, often weighing more than a figurine of equal size.

As mentioned before, other artifacts are limited in number. A tripod with zoomorphic effigies has been found, similar to others seen from Veraguas to the Línea Vieja region of Costa Rica. Another type, an open polychrome tripod bowl, with legs in the shape of "fish otter" heads, is seen frequently in the valley of the Río Grande de Térraba but has not been previously encountered north of the cordillera.

Figure 10 shows a well executed effigy of an armadillo, of the Alligator Ware of the Classic Chiriquí culture. A clay stool, a type not unusual in Chiriquí, is shown in Figure 11. Four monsters are represented holding up a flat, circular platform. At each point on the circumference where the hands touch, a face is depicted. These may be animal or human, or may represent trophy heads. The stone object in Figure 12 would be much more common over the Talamanca Mountains in the Mercedes area of the Línea Vieja region. Two feline figures, facing in opposite directions, support a shallow receptacle, either a stool or a container. There is a well carved guilloche pattern along the rim. As one can see from the breaks, this piece was "killed."

This collection has been presented in an effort to aid in filling some of the gaps which still exist in our knowledge of the pre-Columbian peoples of the Isthmian area. More detailed information regarding type of burials, associated artifacts and other pertinent material will be forthcoming in the future.

AN AMATEUR ARCHAEOLOGIST as well as a medical doctor, the author hails from North Dakota. He studied at St. Ambrose College, Davenport, Iowa (A.B. 1947), University of Notre Dame (B.S. 1948) and the University of Minnesota (M.D. 1951). He also holds the title of Lieutenant Commander, Medical Corps, U.S. Naval Reserve. In addition to Dr. Mitchell's medical duties on the staff of Gorgas Hospital, Panama Canal Zone (where he has been since 1950), he is President of the Archaeological Society of Panama. His interest is in relating the archaeology of the Isthmian area to the anthropology of the Americas.

Dr. Mitchell informs us that a sad note is to be added to his account of this interesting collection of artifacts: the man who brought them out from this wild and unknown area of Panama subsequently returned there with a companion, and neither has been heard of since. Four or five search parties have failed to find any trace of the two men.



1. View of Panajir Dag from Bülbül Dag. At the foot of this mountain, between the theater and the agora, is the "marble thoroughfare." The new excavations are in the middle of the picture.

# EPHESUS

## *Past, Present and Future of an Ancient Metropolis*

By Alfons Wotschitzky, Director of the Archaeological Institute, University of Innsbruck

IT WAS SURELY NOT AN EASY WALK that the British architect J. T. Wood undertook in the neighborhood of Ajasoluk, in Western Asia Minor, about one hundred years ago. Sponsored by the British Museum and by the Society of Dilettanti, he was accompanied by inquisitive Turks but hardly noticed by frog-hunting storks as he searched in the swamps of the Cayster Valley for the remains of one of the Seven Wonders of the World: the temple of Artemis at Ephesus. In 1869 his endeavors were at last crowned with success, for he found parts of this gigantic building, and with much trouble he

succeeded in saving the scanty remains, among them column drums with bas-reliefs, for the British Museum. Much study and hard work were still required before it became possible to form an idea of the two main building periods (sixth and fourth century B.C.) of the great Ionic temple of Ephesian Artemis. Though at least to some extent the dimensions, plan and front elevation could be distinguished, none of the treasures once contained in the temple were found. For centuries the ruins had been used as a quarry, and nothing was left of such works of art as the Amazons by the famous sculptors

## Ephesus continued

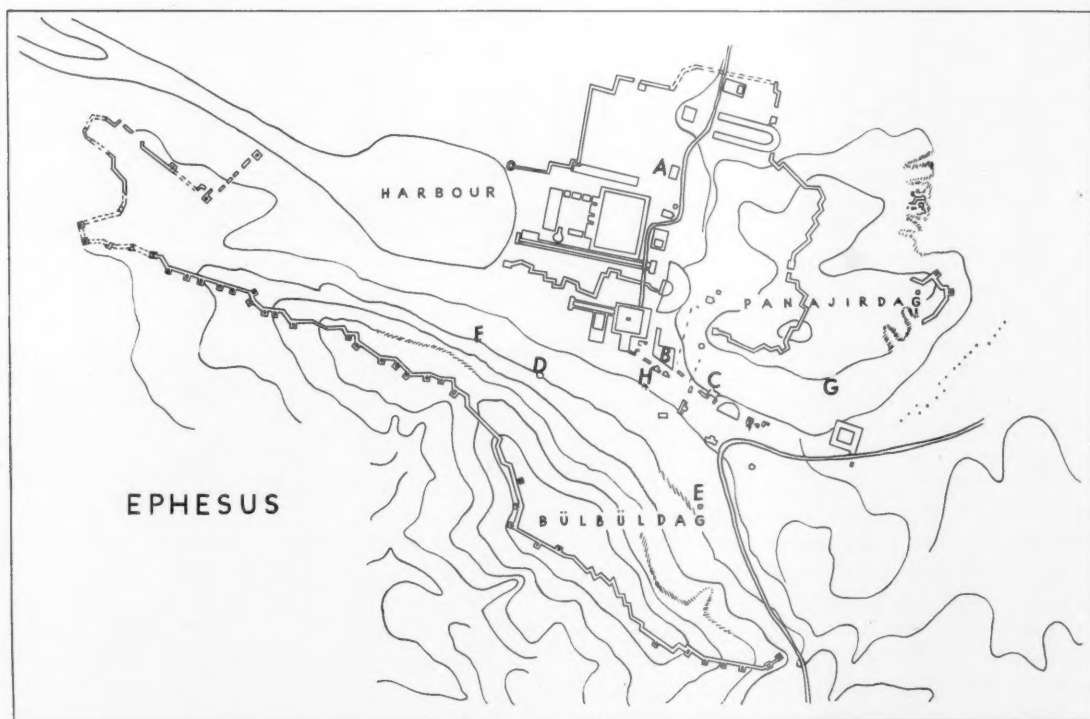
of the fifth century. [See "Pliny's Five Amazons" in *ARCHAEOLOGY* 12 [1959] 111-115.]

The entire area abounded, however, in remains of the two thousand years of this city's history (Figure 1). Well preserved fortification walls and a stadium were clearly visible, a depression that looked like a theater, Roman aqueducts leading to baths and gymnasia. The hills were crowned by Byzantine fortresses or Early Christian churches. These were dilapidated and overgrown, as were the remains of Seljuk domination such as the magnificent mosque of Sultan Isa Bey I (erected in 1375), which looked more like a bombed-out factory building with a decapitated chimney than an Islamic house of worship.

All these ruins had a magical attraction for Otto Benndorf, head of the Archaeological Institute of Vienna from 1877 on, when he visited the place. After several successful ventures at excavating, such as those at Samothrace and Gjöl bashi, he directed his energy to-

ward Ephesus, and, together with other Austrian archaeologists and architects, began digging in 1896. The Austrian Archaeological Institute, which was founded in 1898, continued these excavations, especially under R. Heberdey, who dug until 1913. Heberdey was able to reveal numerous buildings and to clarify the fundamentals of the city's historical development.

THE MAIN ENEMY OF EPHEBUS was not the sea, on which it was originally situated, but a small and slowly flowing stream, first called the Cayster and later named "Küçük Menderes" (Little Maeander). In common with its larger namesake it has the disagreeable property of carrying along much mud, flotsam and rubble from the interior of Anatolia, and usually it quietly deposits all this rubbish in the bay of Ephesus. In the course of twenty-five hundred years it has succeeded in shifting the seashore ten kilometers to the west. Although such newly acquired land may sometimes be made fertile, in this case it was disadvantageous. Ephesus was a commercial town and a port of transshipment. The harbor



2. Plan of the Hellenistic and Roman city. The letters denote the new excavations: A. Byzantine bath. B. Thermae of Scholastikia. C. Bouleuterion, Hall of Hestia, etc. D. Circular tomb on the Bülbül Dag. E. Apsidal building (Early Christian church). F. Cave church with portal (St. Paul's chapel?). G. So-called rock sanctuary. H. Apartment house (*insula*).



became clogged with sand and mud, and had to be transferred farther west. The city was forced to move with the harbor if it wished to maintain the necessary contact with the sea.

It was lucky, in view of these repeated moves, that there were always hills to which the acropolis\* could be transferred. At first it occupied the hill which is today named after the Turkish village of Seljuk (formerly Ajasoluk). After this, in the Hellenistic period, the ruler Lysimachus transferred the city farther west to the slopes of Panajir Dag, which proved a clever and far-seeing act (Figure 2). However, the river continued to encroach upon the city; in later antiquity it became more and more difficult to keep the harbor and the narrow waterway leading to the open sea free for shipping. Eventually the struggle was abandoned and the Byzantine citadel was again transferred, back to the Ajasoluk hill, another reason for this being the constant looting and other dangers which threatened from the sea. Thus Ephesus was cut off from the sea and lost its position as a commercial center at the end of an important road leading to the interior. Mongolians, Seljuks and Ottoman Turks used it merely as a stage on their way to the west coast of Asia Minor. Smyrna, whose position was more favorable, became the successor of this ancient metropolis, and it is still the starting point for visitors to the ruins of its formerly more magnificent rival.

AFTER WORLD WAR I the Austrian excavations were interrupted for many years until J. Keil again succeeded in finding generous supporters for this enterprise. We are indebted to A. Deissmann, representing the *Notgemeinschaft Deutscher Wissenschaft*, and especially to John D. Rockefeller, Jr. for enabling research work at Ephesus to be resumed in 1926. By 1935 it was possible to determine the position of the Ionic settlement, to lay bare the Church of St. John, to find the great gymnasium and to study an interesting mausoleum near Belevi.

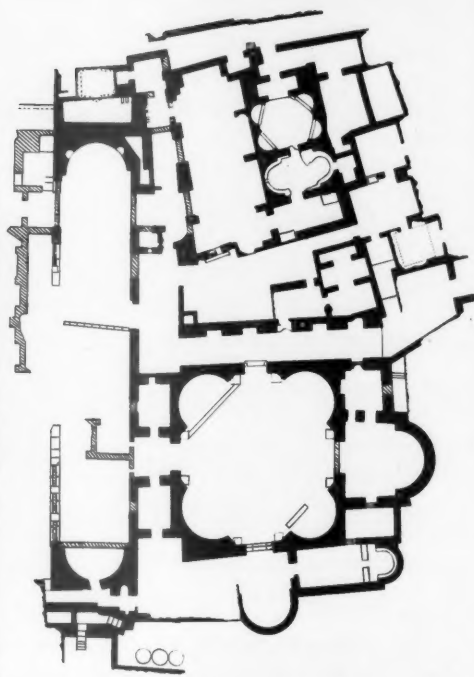
In the course of the latter work as well as during research on the Christian cemetery of the Seven Sleepers excellent work was done by F. Miltner and F. Eichler. It was at Miltner's initiative that excavations were again resumed in 1954 and successfully continued in subsequent campaigns. The work was mechanized and motorized as far as possible, and at the same time the necessary restoration (*anastylosis*) of the newly discovered buildings, as well as protective measures for previously uncovered monuments, was initiated. Miltner untiringly endeavored to raise the necessary funds, from industrial and commercial firms as well as from cultural institutions. He developed into a real financial genius, although the Austrian fiscal authorities granted no reduction of taxes to patrons, as was done in other countries.



3. Recently several effigies of Artemis, the city's patron goddess, have been found. This one, the most beautiful, was exhibited at the World's Fair in Brussels. A detail of the statue is shown above.



4. This magnificent marble thoroughfare connects the monumental center of Ephesus with the southeastern part of the city. On the right, the Thermae of Scholastikia during excavation.



5. The Byzantine baths (A on the plan). A wide transverse portico unites the building complex with the numerous domes and cupolas on the façade.

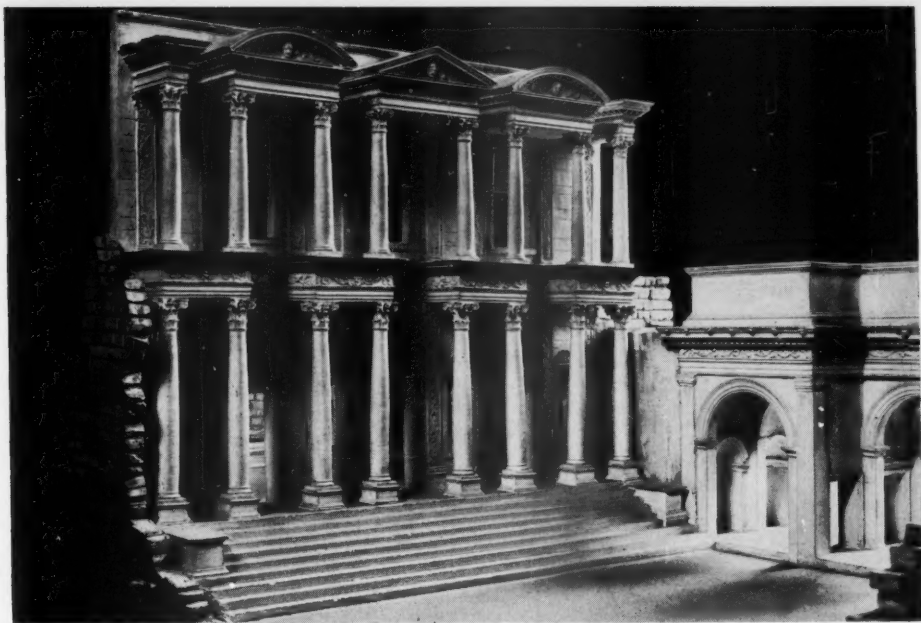
## Ephesus continued

His unexpected sudden death in 1959 was a great loss to the Austrian archaeological team, whose numbers were small enough as it was. However, F. Eichler succeeded in obtaining assurance that excavations would be continued in 1960-61. Eventually it will be necessary to apply for funds to international organizations. Vienna alone will hardly be able to cope with the situation, for other tasks, also assumed in earlier times, must be continued, such as the excavations at Elis, north of Olympia, in Greece.

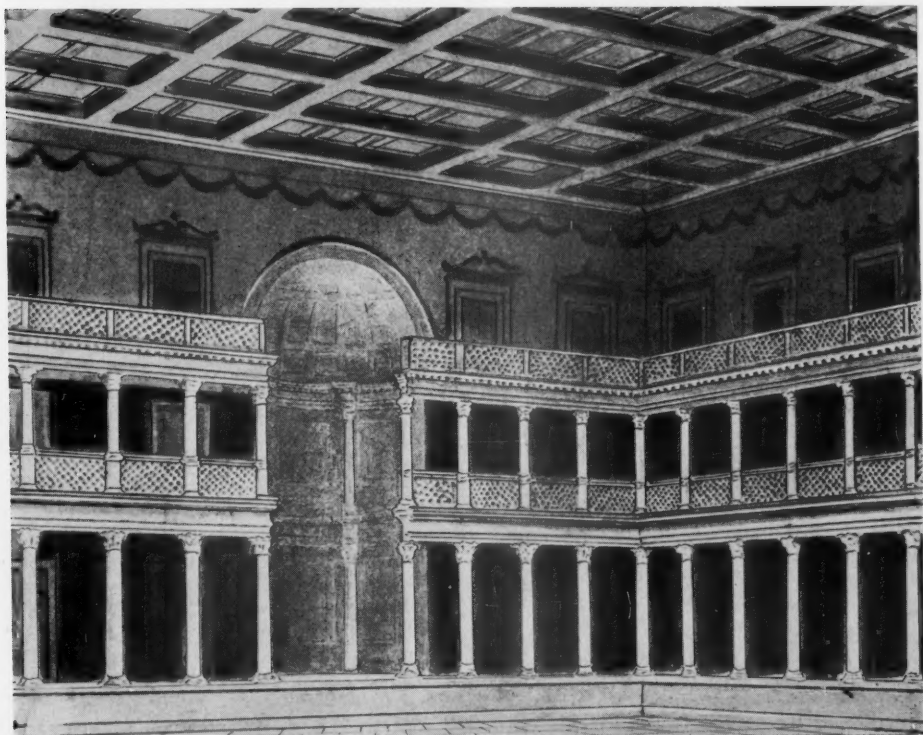
Continuation of the work at Ephesus appears justified by the excellent results obtained as well as by the growing number of visitors who come to see the ruins throughout nearly the whole year, especially in spring and fall. Of the most recent results, reports of which are being published in the *Jahreshefte des Oesterreichischen Instituts* and about which F. Miltner has written a popular

book: *Ephesus, Stadt der Artemis und des Johannes* (*Ephesus, City of Artemis and St. John* [Vienna 1958]), only a small selection, a modest cross-section, can be given here.

AN IMPORTANT NEW DISCOVERY is the open Hall of Worship of Hestia Boulaia, the deity of the city's Holy Fire, whose function was similar to that of Vesta in Rome. The edifice dates to the early Augustan period, but this was certainly the religious center for the Hellenistic city as well, since the time of Lysimachus. Here was the political center, near the Odeum which had previously been hewn out from the slope of the hill. In an adjoining room an almost intact, life-size statue of the goddess Artemis, made from exquisite Parian marble, was found carefully packed in earth (Figure 3). It was christened "Beautiful Artemis" in order to distinguish it from other representations of the same fertility goddess which had recently been found at Ephesus. The statue



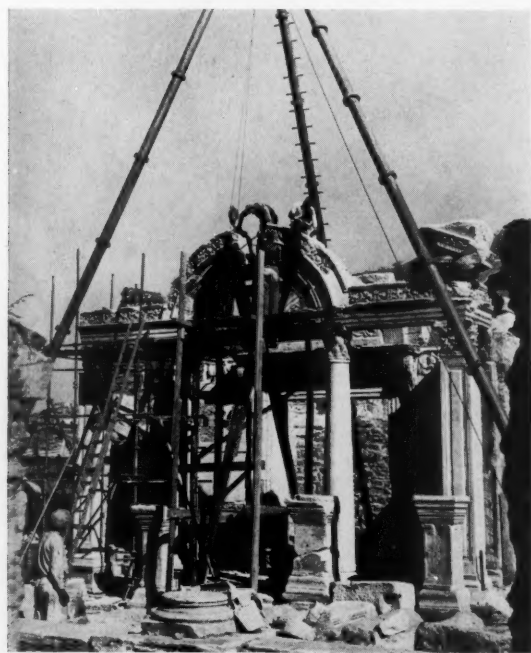
6. The Library of Celsus (west of B on the plan) belongs to the magnificent epoch of Roman architecture. This reconstructed model conveys an idea of the splendidly decorated façade.



7. Reconstruction of the interior of the Library of Celsus, with its sumptuous decoration.



8. Buildings at the southwest corner of the Panajir Dag. At the left, beside the broad staircase, can be seen the remains of the small temple dedicated to the emperor Hadrian, as it appeared before its recent re-erection.



9. Rebuilding the temple erected to the emperor Hadrian about A.D. 130. *Left:* the work in progress; *right:* the final result.



## Ephesus continued

was probably made and erected in the course of the later Roman imperial period. It was certainly only one of numerous replicas of the statue of the ancient patron goddess of the city which were set up during the course of time in the vicinity of the town hall (*prytaneion*) and the adjacent Hestia precinct. Every large museum today has one or more examples of the type. The block-like, archaizing character of this statue is varied by protomes of animals, which characterize the goddess as "Mistress of Animals." The egg-like objects just above her waist, formerly considered as multiple female breasts, are now correctly interpreted as ostrich eggs decorating her garment. Ostrich eggs, as a symbol of fertility, may still be found today in nearly every Greek village church. Unfortunately the goddess' mural crown is missing, as are also the deer which once stood beside her (their hooves alone are preserved) and the supports for her outstretched hands, which must have rested on the basket-shaped bases which are still preserved. The sculptural ornament is, however, still very rich: on the nimbus around the goddess' face are bull-headed and lion-headed griffins, while in low relief on her breastplate are *horai* (seasons) and *nikai* (victories) surrounded by a collar of seeds or grain, and below this the signs of the zodiac. Beneath the three rows of ostrich eggs are protomes of lions, winged griffins, does and cattle. On the sides her garment is decorated with winged female figures, rosettes and bees, in low relief. Many traces of the original gilding can be seen on the figure.

This statue was deliberately buried, in a manner similar to that of the *korai* (maidens) on the Acropolis of Athens after it was damaged by the Persians. When, in the Christian era, the Hestia sanctuary was used for other purposes, so much respect and awe was shown for the "dead deity" that she was buried with the same honors as a deceased person.

In the new excavation site between the theater and the Odeum we also found the *thermae* (baths) which were erected toward the end of the fourth century by a Christian woman named Scholastikia who also had them restored (Figure 4). For this purpose she used part of the hall of Hestia, the porch of which was largely transferred here. Various parts of the building bear inscriptions of the earlier religious society of the *Curetes*, thus giving evidence of its origin. This bathing establishment covers an area of fourteen thousand square meters; it

has two *caldaria* (hot rooms), a sweat-room (*sudatorium*), a massage chamber, etc. The rooms of the upper story have marble and mosaic floors and once had painted walls.

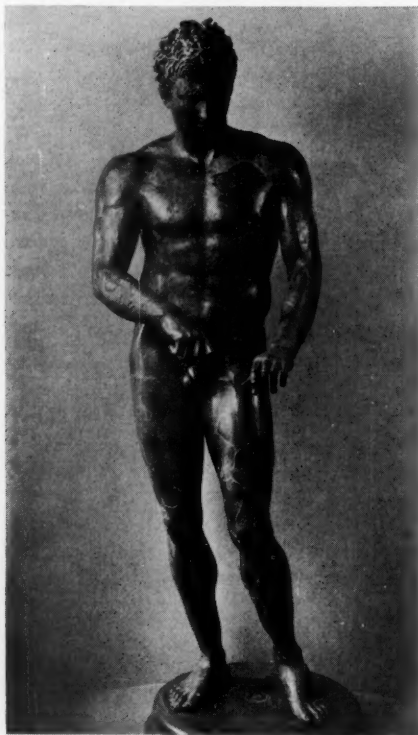
For the history of the Roman bath Ephesus is a useful source. Right up to the Byzantine era new *thermae* were being built in this city, where sports and bathing were so popular. Between the theater and the stadium, at the foot of the Panajir Dag, a bath was built some time after 500 (Figure 5). This establishment consisted of a portico across the entrance, similar to the narthex of a Byzantine building, and a domed circular hall with wide niches at the corners; its outer form is, however, nearly a square. These rooms suggest mosques or even Turkish baths, and the whole installation forms a valuable connecting link between the Roman and the Turkish bath. The rooms provided for gymnastics in the earlier gymnasium become smaller here and are gradually eliminated, while the cold-water baths are omitted; however, there always remained halls and recesses for conversations, lectures and discussions. The hall previously used for the imperial cult was replaced by a Christian chapel.

On the main street, which leads past the theater toward the south and then branches toward the east, other interesting edifices have been located and excavated. These adjoin the library of Celsus, previously uncovered, a magnificent building at the first corner toward the southeast. Its excellent state of preservation has made it possible to form a concrete idea of the appearance both of the façade and of the interior with its galleries and built-in bookcases (Figures 6, 7).

MOST OF THE NEWLY DISCOVERED BUILDINGS in this quarter were built at the same time and, later, restored simultaneously. Under the emperor Trajan a richly adorned fountain, decorated with statues, was erected beside the site of the later baths of Scholastikia. It is similar to the well known *nymphaeum* of Miletus, with its many-niched rear wall. In the center stood a statue of the emperor, twice life-size. It cannot be said, however, that this structure stood in the best neighborhood, for immediately beside it was the city's public brothel and a latrine. This association seemed to have disturbed neither the Roman inhabitants nor the emperors, for a few steps farther on there was a small but fine temple erected in honor of the emperor Hadrian (Figure 8). So much of its architecture has been preserved that it can now be reconstructed (Figure 9). Although the building was later restored, we believe that the semicircular arch above



10. This impressive portrait was found in the theater. It proves that as late as the sixth century Ephesus still erected statues to its great men. (Museum of Historical Art, Vienna)



11. Bronze statue of a wrestler, pieced together from hundreds of fragments. The position of the hands was recently corrected: the athlete now cleans the strigil after having used it to cleanse his body from the dust of the palaestra. (Museum of Historical Art, Vienna)

## Ephesus continued

the central intercolumniation is original. Thus we have further proof of the fact that this element was used in the Hadrianic era (as in the emperor's villa at Tivoli and in the *propylon* of the water castle near Athens). Hitherto architectural historians have been of the opinion that the semicircular arch was typical of late Roman times, but now it is proved to have existed as early as the middle of the imperial period.

It was clear from earlier excavations that the builders of Ephesus avoided long, tedious streets, preferring to interrupt them with gates and other monuments. In the newly excavated street was found a gateway which is very like Hadrian's arch at Athens and probably dates from the same period. In this case also the semicircular arch is found in both stories.

Last but not least, recent excavations have given valuable information concerning domestic architecture. While the public buildings are mostly grouped along the main streets, residential quarters with many-storied *insulae* are found at a little distance from the city's center. In numerous cases the ground floor contained shops and taverns, while the upper stories were the living quarters. On the surrounding hills, especially the Bülbül Dag, and on terraces as well, stood villas which are easily able to bear comparison with Hellenistic houses. They had bathrooms, guest rooms, banqueting halls and later, during the Christian era, private chapels. The discovery of such establishments helps to complete the plan. After all, it is important to find out where and how the half-million inhabitants of this great city lived and found their accommodation.

NUMEROUS works of sculpture have been found in the course of recent campaigns. They date to later Greek times as well as the entire Roman period up to the Byzantine era (Figure 10). Further work has also been carried out on earlier finds, as e.g. the bronze athlete of the fourth century B.C. (in Museum of Historical Art, Vienna) which was once pieced together with great care from 234 fragments. F. Eichler has convincingly corrected the position of the hands. The athlete is no longer cleaning his hands by means of a strigil (which is still to be added) but he is removing from the strigil the dirt he has scraped off his body (Figure 11).

Though the newly discovered finds must remain in Turkey and may no longer be exported as they once were, Austria nevertheless believes she is fulfilling a duty toward science by continuing these excavations—an obligation which she had undertaken in better and more prosperous times—and she further believes that this is a modest contribution toward international cooperation.



# ARCHAEOLOGICAL NEWS

## Expedition to Nubia

During January, February and March 1961 a joint expedition of the University Museum of the University of Pennsylvania and the Peabody Museum of Yale University sponsored the first of a series of excavations in Egyptian Nubia. For Pennsylvania the mission represented its seventh season of work in Nubia and a continuation of the Eckley B. Coxe, Jr. expedition, which conducted excavations in Nubia from 1906 to 1912 under the late David Randall-MacIver and Leonard Woolley. For Yale it was the initial season in Egypt, made possible by a grant from the Bollingen Foundation established by Mr. Paul Mellon.

The staff consisted of William Kelly Simpson, director; Nicholas B. Millet, assistant director; Mr. James Delmege, photographer; Anthony Casendino and Jean Jacquet, architects; Edward L. B. Terrace and Mme. Jacquet, archaeological assistants; and Mahir Saleeb, representative of the Antiquities Service. A large part of the expedition's equipment was kindly lent by the German Archaeological Institute.

The expedition's concession lies in the districts of Toshka and Arminna,

## Annual Meeting of the ARCHAEOLOGICAL INSTITUTE OF AMERICA

The sixty-third General Meeting of the ARCHAEOLOGICAL INSTITUTE OF AMERICA will be held jointly with the Annual Meeting of the American Philological Association at the Statler-Hilton Hotel, Detroit, Michigan, on December 28, 29 and 30, 1961.

The program of the meeting will be mailed to all members of the Institute. Persons who wish to read papers should submit titles and abstracts of not more than 200 words (in triplicate), not later than October 20, to the General Secretary, ARCHAEOLOGICAL INSTITUTE OF AMERICA, 5 Washington Square, North, New York 3, N. Y.

the area bounded on the south by the Abu Simbel district and in the north by Aniba, the major town in Egyptian Nubia. In this area we examined several sites for excavation during our first season and mapped others for future investigation. The main areas examined and partly excavated were: an extensive cemetery of the Romano-

Nubian period at Toshka West, a small cemetery of the following X-group period, a complex of Coptic buildings and a series of houses used successively in the Meroitic, X-group and Coptic periods, all at Arminna West, a cemetery of the C-group (Middle Kingdom) at Toshka East, and a series of three rock-cut tombs of the New Kingdom at Toshka East. In addition, copies were made and photographs taken of rock drawings and inscriptions of the Middle and New Kingdoms. The inscriptions from the excavations and the graffiti include material in four languages, reflecting the range of time involved and the cultural influences: Egyptian, Meroitic, Coptic and Greek.

Toshka West was the terminal point for a route to the diorite and amethyst quarries, and previous research had revealed a series of cairns marking the track. One of them appears to have had a message box incorporated in it. From these quarries the blocks for the Chephren statues were cut. Over twenty years ago graffiti and stelae were discovered at the quarries which were inscribed in the reigns of the pyramid builders of the Old Kingdom

## THE WINTER 1961 ISSUE

will be devoted to the publication of a

## SYMPOSIUM ON ARCHAEOLOGICAL SALVAGE

which was presented at the meeting of the American Association for the Advancement of Science, December 29, 1960, in New York City.

**Illustrated articles** will cover the following areas: United States, Canada, China, Egypt, Great Britain and Mexico. Special subjects treated include: river basin salvage, highway construction salvage, techniques and tools of archaeological salvage, and the contribution of physics to archaeological exploration. This symposium constitutes the first comprehensive international survey of the pressing, world-wide problem of archaeological salvage.

**Extra copies** of the issue may be ordered before publication at the regular price from the Business Office, 5 Washington Square, North, New York 3, N. Y.



Stela of the XIIth Dynasty from Toshka West, in Egyptian Nubia.

and the kings of Dynasty XII, and during the 1961 season two more inscriptions were found near the river. The first of these is a badly weathered and fragmentary Old Kingdom text which was discovered under the gangplank of the expedition boat. Of the little that remains of the text the place-name Satju is of the greatest interest, since it probably provides the oldest name for the region and identifies Toshka as Satju. The name is well known from the biography of the caravan leader Horkhuf on the façade of his tomb at Aswan. Here Horkhuf relates that he had found a dancing dwarf and that his king, the then



The two finest of the funerary statuettes (shawabti) of Heka-nefer.

seven-year-old Pepy II of Dynasty VI, had given him instructions to bring the dwarf to the court immediately, to check ten times a night on the way to see that nothing untoward might befall the dwarf, and to make certain that he did not fall overboard. On one of these trips to the south Horkhuf visited Satju, and thus it is not impossible that he himself was the author of the damaged fragment found this year. The second record of a visit to Toshka in ancient times is on a stela found by the villagers. It tells of an expedition sent to the quarries in Year 4 of Amenemhet II of Dynasty XII (1927 B.C.), under the leadership of the herald Horemhet. The labor force consisted of over twelve hundred men, including stone-cutters and lapidaries, and was provided with one thousand donkeys, presumably as pack animals for the stones quarried and the equipment.

The principal work at Toshka West consisted of the examination of a large cemetery of the Meroitic period. About sixty graves were cleared, and to judge by the area still untouched, the cemetery may have over six hundred graves. Although these had been plundered in antiquity to some extent, the cemetery had not been previously noticed in modern times. In addition to a large quantity of pottery, including some of the fine decorated beakers, various copper and glass vessels were found. The most interesting objects were a wooden kohl tube with its cover and stick, the tube and its cover inlaid with small ivory pegs at regular intervals, a fine copper seal ring with a representation of the Egyptian god Bes, and a copper ladle with a handle terminating in a serpent's head. This last is virtually a duplicate of a ladle found in the Romano-Nubian cemetery at Aniba (published by Woolley and MacIver under the title of *Karanog*). Other parallels between the Toshka and Aniba cemeteries show that they must have been contemporary.

Of the sites examined in 1961 none is of more interest than the rock tombs of the New Kingdom at Toshka East. The southernmost tomb is that of Heka-nefer, a prince of Miam at the end of Dynasty XVIII. In the neighborhood five of his graffiti were found, only one of which was previously known and published. It is clear that

Heka-nefer is the same prince who is represented at Thebes in the tomb of Huy, viceroy of Nubia in the reign of Tutankhamun. He is shown as a Nubian in a procession of tribute which includes ivory tusks, disks and bags of gold, ostrich feathers and a giraffe. The tomb at Toshka, however, represents him as an Egyptian. It once had painted wall decorations in the Theban style, and the plan of the tomb is a copy of the plan of Huy's tomb. From the fragments of the grave equipment left by the plunderers, it is evident that the prince had imported his *shawabtis* and other objects from Thebes. The traces of the paintings suggest that a Theban artist was likewise imported. Thus Heka-nefer was a thoroughly Egyptianized Nubian, and only the location of his tomb at Toshka and his features as represented at Thebes give an indication that he was not an Egyptian. Among the titles indicating his relationship to the Egyptian court is "child of the nursery," a designation borne by several foreigners who had been educated at the Theban court with the royal children.

In the division of finds the Egyptian Museum in Cairo exercised its right to retain for its collections four pieces: the stela of Horemhet, a Meroitic seal ring, and two of the shawabti of Heka-nefer. The bulk of the material, including many of the finest objects, was assigned to the expedition for subsequent division between the Peabody and University Museums.

WILLIAM K. SIMPSON

### Excavations in Phoenicia

The Danish Expedition at Jebelch in Syria, sponsored by the Carlsberg Foundation of Copenhagen, had its third season from July to December, 1960. A short summary of the results of the first campaign, with a note on the second, was given in *ARCHAEOLOGY* 12 (1959) 283; the preliminary reports are printed in the *Annales archéologiques de Syrie* 8/9 (1958/59) and 10 (1960).

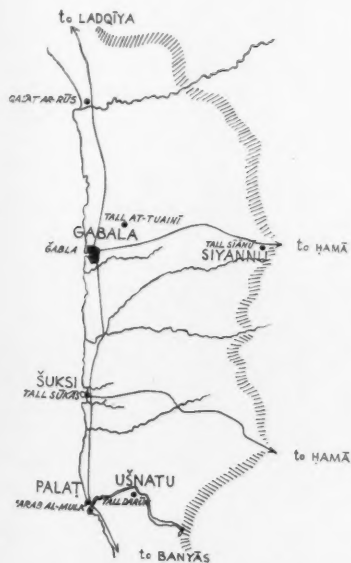
As will be remembered, the expedition began its work in 1958 at Sukas, half-way between Jebelch and Banyas, the end of the North Syrian pipeline, and in addition made a sounding of Arab al-Mulk, the ancient Paltos, a few kilometers to the north of Banyas. During the second season another



sounding was made on Tell Daruk at the Sinn River east of Arab al-Mulk. The deepest layer of habitation at Tell Daruk dates from the Chalcolithic Period (fourth millennium B.C.), and the finds on this tell and at Sukas seem to indicate that both towns were destroyed in the mid-ninth century B.C., rebuilt, and once more destroyed in the middle of the sixth century. As to the ancient names of the two sites, there are strong arguments in favor of an identification of Tell Daruk with the Crusaders' "Assene," the Phoenician "Usana," and of Sukas with "Shuksi" of the famous texts from Ras Shamra-Ugarit.

In the third campaign the members of the staff were the following: P. J. Riis (director), E. Fugmann and G. Garde (architects, the former also vice-director), Marie-Louise Buhl-Riis and S. Sondergard (Orientalists), H. Thrane and J. Jensen (prehistorians), Ida Haugsted (Classical archaeologist), F. Maurtvedt (photographer) and F. Visti (technician). Work was resumed at Sukas on the tell itself, and a supplementary excavation was made at the other side of the natural harbor to the south of the tell.

On the tell the sounding begun in 1958 near the middle of the mound came to an end when the rock was reached at a depth of 16.50 meters.



The plain of Jebel (G)abla), showing site of Danish excavations.

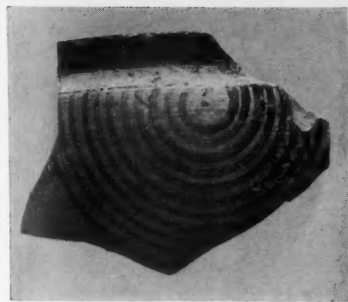
The earliest settlement proved to be Neolithic, probably of the sixth millennium B.C., to be compared with Ras Shamra V, Amuq A and Hama M. Important finds of the Early Bronze Age were also made, including pottery and a large quantity of carbonized grain (first half of the third millennium B.C.). A clay tablet with cuneiform script in the style and language of Ugarit is the first of its kind found in Syria outside Ras Shamra. Its text is an enumeration of personal names and figures, and on the edge it is stated that "... belonged to the House of the King." In this document we seem to have a list of payments to military



Clay tablet with inscription in Ugaritic, from Tell Sukas.

persons, and presumably there was an Ugaritic frontier garrison at Tell Sukas.

New sectors were opened both in the central and the northeastern parts of the mound, and houses containing, among other things, Greek pottery of the eighth and following centuries were brought to light, not to speak of the remains of the Crusader castle. Local pottery of Greek shapes or with Greek inscriptions and the great amount of Greek sherds show that the population comprised a considerable Greek element. To judge from Proto-geometric fragments turned up during the second campaign, the Greeks established themselves at the end of the ninth century B.C. No doubt Sukas had an importance similar to that of the settlement at Al-Mina discovered by the late Sir Leonard Woolley near the mouth of the Orontes. Greeks liv-



Proto-geometric Greek potsherd found at Tell Sukas.

ing in such places on the Phoenician coast played the role of cultural agents or mediators between East and West at a time when the Phoenician manner of writing, that is, the alphabet, was transmitted to Greece, and the Early Archaic or Orientalizing Greek style was formed.

The results of the expedition's work near the harbor are also of interest. At this place, vis à vis the town, there seems to have been, as early as the fourth or third millennium, a small settlement which, however, was soon abandoned. For some centuries from the end of the Bronze Age or the beginning of the Iron Age, i.e. about 1200 B.C., the same site was re-used as a cemetery. The funeral rite was cremation, a new phenomenon in Phoenicia at this period, and its appearance was perhaps a consequence of the great invasions which took place in the countries of the eastern Mediterranean. The Pharaoh Ramses III speaks of "the Peoples of the Sea" who were stopped at the northeastern fron-



Late Rhodian vase found at Tell Sukas.

tier of the Egyptian empire, and we learn from the French excavations that Ras Shamra-Ugarit was completely destroyed about 1200 B.C. But Sukas-Shuksi survived, although apparently with a partially different population, later also to be mixed with Greeks.

Inhumation graves occur from the seventh century B.C. onward; some of them contain Greek pottery. In the sixth century B.C., when the town reached its zenith, a sanctuary was built on the beach at the edge of the cemetery. The badly preserved remains include fragments of votive statuettes of stone and clay, among them some representing Bes and Heracles, whom the Greeks identified with the Phoenician god Melqarth. The sanctuary consisted of a small chapel, a court with altars and a secluded area, where part of at least one obelisk like those in the Reshef temple at Byblos was found. The latest finds in the sanctuary date from the second or first century B.C.

P. J. RIIS

## SAA Annual Meeting

The twenty-sixth annual meeting of the Society for American Archaeology took place at Columbus, Ohio, May 4-6, 1961. Three other organizations—American Association of Physical Anthropologists, Central State Anthropological Society, and American Ethnological Society—held their meetings in conjunction. The hosts were the Ohio State University and the Ohio Historical Society.

After the formal opening on Thursday morning a symposium on patterns of land utilization was first on the program. This included discussions of agricultural systems and their related ecological background and social implications in Southwest Asia, in the Philippines, in two Old World areas, and in the lowlands and highlands of Mesoamerica. The speakers were K. V. Flannery, E. P. Dozier, W. T. Sanders and Pedro Armillas.

At a Thursday afternoon session the archaeology of Southwest and Northern Mexico was treated in the following papers: "Results of an archaeological survey in eastern New Mexico," by Arthur Jelinek; "Archaeological reconnaissance in Durango, Zacatecas, and Jalisco, Mexico," by J. C. Kelley; "Prehistoric water management in the arid southwest," by R. B. Woodbury;

"Introduction to the study of Southwestern archaeology," by Irving Rouse (who announced that Yale University Press will reprint A. V. Kidder's *An Introduction to the Study of Southwestern Archaeology*); "An aboriginal masonry dam in Glen Canyon," by F. W. Sharrock and J. D. Jennings; "Environmental chronology of the Little Colorado drainage area, Arizona," by James Schoenwetter; and "Paleo-Indian horizons in northeastern Mexico," by J. F. Epstein. A simultaneous session was concerned with reports on excavations at sites in Indiana, Illinois, Georgia and Florida.

A symposium on Friday morning, entitled "Cultural and Biological Continuities in Eskimos and Indians," included papers by J. L. Giddings, W. S. Laughlin, J. B. Griffin and M. T. Newman, with summaries by Elmer Harp and D. S. Byers. Giddings' paper outlined some nine broad, Arctic-wide cultural horizons.

Three sessions ran concurrently on Saturday morning. One dealt with the prehistory of the Upper Great Lakes area. At the second session, on Northern Archaeology, archaeological problems in Ontario, New York, Alaska, British Columbia, Wyoming and Washington were discussed. The third session was a symposium concerned with historic sites and involved seven participants: Kenneth Kidd, Elaine Bluhm, Marian White, G. H. Smith, Stanley South, Reed Masse and C. G. Boulter.

At one of the final two sessions attention was given to Middle and South

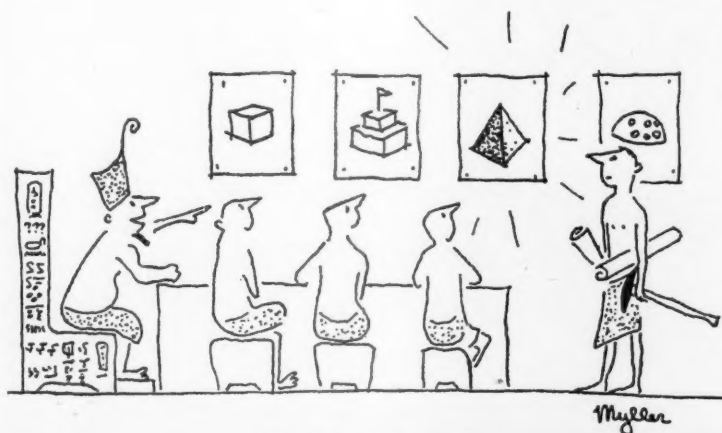
America. Of particular importance was M. D. Coe's survey of Costa Rican prehistory, while other papers dealt with Mexico and Peru. The concurrent session, "A Broad View of Archaeological Method," included several papers of much interest. A. D. Krieger pointed out how little solid archaeological and ethnographic data had been used by historians, and plotted a route for Cabeza de Vaca that fitted both cultural and topographic data. G. A. Black reported real success with a proton magnetometer in mapping anomalies at Angel Mounds; they are proving to be palisades so far. He hopes to find graves, houses and so on, with this summer's work.

David A. Baerreis was elected President, and Alfred Kidder II, Treasurer. Next year's meeting will be at Tucson, Arizona, May 3-5; the 1963 meeting will be at Boulder, Colorado.

## A Numismatic Experiment

A United States coin of great rarity as well as of archaeological interest has recently been donated to the Smithsonian Institution by Mr. Cornelius Van S. Roosevelt. This is an experimental twenty-dollar gold piece, dated 1907. The story is as follows:

In the winter of 1905 President Theodore Roosevelt met the sculptor Augustus Saint-Gaudens. The conversation drifted to the beauty of ancient Greek coins, which Saint-Gaudens described as almost the only coins of real artistic merit. Why could not the



"I like the pointed one best!"

Courtesy of Oculus



Rare experimental twenty-dollar gold piece designed by Saint-Gaudens and struck in 1907 by order of President Theodore Roosevelt. Photo Smithsonian Institution.

United States have coins as beautiful as the Greek ones, the President wished to know. If Saint-Gaudens would model them, he, the President, would cause them to be minted.

Thus started a unique venture in modern monetary history. Theodore Roosevelt found the time to conduct personally the campaign for a more artistic series of United States coinage designs. On November 6, 1905, the President said in a letter to Saint-Gaudens:

"I want to make a suggestion. It seems to me worth while to try for a really good coinage, though I suppose there will be a revolt about it! I was looking at some gold coins of Alexander the Great today, and I was struck by their high relief. Would it not be well to have our coins in high relief, and also to have the rims raised? The point of having the rims raised would be, of course, to protect the figure on the coin; and if we have the figures in high relief, like the figures on the old Greek coins, they will surely last longer. What do you think of this?"

For two years President and sculptor gave much time and energy to the task of producing the new coin designs. The models finally adopted show on the obverse a standing figure of Liberty, holding aloft the torch of enlightenment and the olive branch of peace. On the reverse is a flying eagle above a rising sun.

A few experimental pieces having an extremely high relief were struck at the President's order. These exceedingly rare pieces can easily be distinguished from those issued later for general circulation. The field is excessively concave and connects directly

with the edge without any border, giving it a sharp, knife-like appearance. Liberty's skirt has two folds on the side of her right leg, the Capitol building in the background at left is very small, the date (1907) is in Roman numerals. The sun on the reverse has fourteen rays.

In addition to these experimental pieces, 11,250 high-relief twenty-dollar gold pieces were struck on a medal press for general distribution. Their relief is somewhat lower than that of the experimental pieces and there are differences in detail.

For practical reasons, especially since these coins could not be struck on a regular coin press and would not stack, it was soon decided to revert to flat relief. A large number of similar flat-relief double eagles were issued in 1907 (these pieces show the date in Arabic numerals) as well as in later years.

Theodore Roosevelt's words about the experimental gold piece are worth recalling: "Certain things were done of which the economic bearing was more remote but which bore directly upon our welfare, because they add to the beauty of living and therefore to the joy of life."

### The Warship *Vasa* Rises Again

A feat in the history of marine salvaging is nearing its dramatic end in the inner harbor of Stockholm—the raising of the Swedish warship *Vasa*, which capsized and sank at the outset of her maiden trip on August 10, 1628, with a great loss of life.

The *Vasa* was built for the navy of King Gustavus Adolphus. The oaken vessel, 162 feet long, displaced four-

teen hundred tons, had three decks and carried sixty-four cannon, all of bronze and with a total weight of about eighty tons. The *Vasa* was, in fact, built to be one of the mightiest warships of her era. Her loss, witnessed by many people from the shore, was a national disaster. In naval history, however, there are numerous examples of large warships suddenly having keeled over and sunk, even in protected harbors.

Many salvage attempts were made in the seventeenth century, the first one almost immediately after the ship had sunk. A British engineer was in charge. He did not succeed in raising the ship, but he managed to put it on an even keel, which has been of great importance for the present salvage project. In 1629 the work was resumed by the Swedish Navy, but all attempts failed. In 1658 a diving bell was successfully used for the first time at such a great depth (one hundred feet). In 1664 the first cannon was brought to the surface, and by the next year most of the cannon had been recovered. One cannon was brought up in 1683, but after that all salvage efforts ceased, and even the position of the *Vasa* was gradually forgotten.

In the summer of 1954 a young amateur naval archaeologist, Anders Franzén, began a one-man search for the *Vasa*. He had already conducted similar experiments with other ships sunk in the Baltic, and now he began systematically to probe the entire Stockholm harbor with leads and grapnels of his own design. In 1956 he was able to locate the contours of a ship on the bottom, and he soon became convinced that this was the *Vasa*. The Royal Navy and the Maritime Museum in Stockholm then entered the picture. A master diver was sent to explore, and he came up with the assurance that it was, indeed, a large galleon-type ship, undoubtedly the *Vasa*. Plans were mapped for raising the ship, and while these preparations were being made divers began to explore the hull. Hundreds of objects were brought to the surface, including two cannon and many pieces of wooden sculpture.

The first stage of the salvage operation involved digging six tunnels below the hull, through which stout steel wires were passed to two pontoons, one on either side of the ship. The



The seventeenth-century warship *Vasa* after having been recovered from the bottom of Stockholm harbor. Photo American Swedish News Exchange.

tunneling was done with a powerful water jet combined with a mud-suction pump. It is considered one of the most complicated and dangerous underwater jobs ever carried out at such a great depth.

On August 20, 1959, the hull was raised from its bed. Still submerged and resting in a "hammock" of heavy wire, it was then slowly towed to shallower water. On September 16 it arrived at the place in the inner harbor where it was to remain until emptied of its equipment. The final lifting of the *Vasa* began in April of this year. The hull has now appeared above the surface for the first time in more than three hundred years. It will be placed in a gigantic caisson and towed into drydock.

For the next six or seven years the *Vasa* will rest in her caisson some

seventy feet from the shore, where a floating boathouse will be erected. At first, the water-soaked oaken hull will require a high degree of air humidity, and the boathouse must therefore be airtight and air-conditioned. From a gallery visitors will be able to follow the work of the experts.

This remarkable accomplishment is due to the energy and imagination of her rediscoverer, to the skill of the divers and the modern salvaging techniques used by the Swedish Navy, and to a most unusual or even unique combination of favorable geographical and historical circumstances. If there was to be any chance of salvaging the *Vasa* the ship could hardly have sunk at a better place. The water in Stockholm harbor contains very little salt, and there are no tides or strong currents. The hull, which had become imbedded in a layer of mud, has therefore remained in good condition. Its iron nails have long been useless, but there are also some twenty thousand wooden pegs still serving their purpose. The fact that most of the cannon were recovered at an early stage is also of great importance. If they had not been removed, the *Vasa* would never again have been able to float on her own keel.

The archaeological importance of the *Vasa* is very great. Finds are to a large extent restricted to objects of stone or metal, while organic material is frequently destined to decay, and archaeologists working in Scandinavia

are particularly unfavored in this respect. Any really large finds such as the well preserved Viking ships, which have added immensely to our knowledge of that period, are of enormous value.

When the *Vasa* is carefully examined, there should be found the personal equipment of the officers and men, cutlery and kitchen utensils, provisions, tools and instruments, in all an excellent cross-section of daily life in the seventeenth century. In the ship are also the skeletons of those who died in the catastrophe.

The work on the ship and her contents is in charge of Per Lundström, of the Swedish Museum of National Antiquities. The objects will first be systematically removed from the mud and their positions recorded. Records, plans and photographs will provide the foundation for later analysis.

As soon as this registration is complete, the finds will be handed over to the conservation department. Until they have been treated, the finds will be kept in water, as the drying out of material can cause irreparable harm.

There will be a number of problems to overcome. The work will have to be done in cramped spaces and with the utmost care, as the strength of the ship is still an unknown factor. As the ship overturned when it sank, the stores and provisions will certainly have been dislodged, and it will be difficult to figure out how they were originally stowed. The moving of heavy objects around the ship is also likely to give trouble. Taking these out through the hatches and gun ports will be difficult since they will be abnormally heavy, owing to their soaked condition.

The archaeologists have a difficult task ahead, but one of the most fascinating and exciting that a historian could dream of.

### Mycenaean Issue Offered

Those of our readers who missed the very popular special Mycenaean issue (Spring 1960, Volume 13, No. 1), or who wish to obtain extra copies for students or friends, may be interested to know that a limited number of copies is still available. These may be purchased at the regular price of \$1.25 by writing to ARCHAEOLOGY, 5 Washington Square North, New York 3, New York.



A specialist working on conservation of wooden sculpture from the *Vasa*. Photo American Swedish News Exchange.





## REVIEWS OF RECENT BOOKS

**GREEK SCULPTURE**, a Critical Review, by RHYS CARPENTER. xiv, 276 pages, 47 plates. University of Chicago Press, Chicago 1960 \$6.95

A recent issue of *Vogue* contains a test by which readers may determine whether they are "with it" or still following yesterday's fashions. If you have "art books on coffee table" you are no longer with it. If you have "art books on night table" you have kept up with the world. Mr. Carpenter's book is not suitable for either location. For the coffee table the pictures are not startling enough; for the night table the text is too stimulating.

The second half of the title, "A Critical Review," is its most important part. The book is not an introduction to the beauties of Greek sculpture. Its purpose is rather to persuade those who enjoy looking at Greek sculpture that they ought also to think about it. In this purpose the author succeeds completely. That he does not always persuade us to think exactly what he thinks about individual works is perhaps not so important.

His aim, clearly stated, is to show "that sculptural styles are not casual mannerisms, such as an artist might at any time invent and popularize, but are strictly conditioned by evolutionary laws which are in turn dependent upon the unchangeable dictates of the mechanism of human vision." His exposition is thus anchored at one end to science, which is expected to explain the unchanging dictates of human vision but does so through Protean mutations of the English language. The theory of vision that Carpenter uses is so up to date that he is constantly forced to apologize for the jargon in which the scientists have couched it. He summarizes it concisely, however, and his main point is valid and important: that sculpture, even though its works exist in three dimensions, is always a visual, never literally a "tactile" art.

The evolution of Greek sculpture from the beginning of monumental sculpture in the seventh century B.C. to the end of the Hellenistic period is examined by analyses, admirably expressed, of important works. Classical sculpture is what Carpenter loves most and explains best (emotions are supposed to have no place in the work, but it would be much less interesting than it is if the author had followed his own prescription). The section on the beginnings is most valuable for its foreshadowings of what is to come. The historical beginnings of Greek sculpture from many branching roots are too complicated for Carpenter's taste; he schematizes them arbitrarily. When he actually admires an Archaic work, he sometimes sees it more Classical than it is. He tells us that the ground of the stele of Aristion, "once colored a deep blue, gave an illusion of continuous extension beyond and behind the warrior, much as the sky is sensed to lie behind as well as beyond any figures seen against it." It may be that blue is the right color for this purpose and was preferred for this reason by Classical artists, but the background of Aristion is red. Small points such as this frequently force the reader to check his own memory against reference books, conveniently collected by Carpenter in an excellent bibliography. One finds occasionally

that the author is mistaken, more often that one has oneself simply failed to observe an important detail.

If there is any point on which the reviewer is tempted to take issue, it is the overriding importance given by Carpenter to technical procedures, especially to the distinction between glyptic and plastic. Connected with this is his rather unconvincing picture of early bronze-casting, which may be corrected or at least modified when the results of the study now being made of the Piraeus bronze *kouros* become known.

EVELYN B. HARRISON

Columbia University

**ROMAN THEATER-TEMPLES**, by JOHN ARTHUR HANSON. 112 pages, 55 figures. Princeton University Press, Princeton 1959 (Princeton Monographs in Art and Archaeology, 33) \$7.50

In this very interesting book Mr. Hanson examines the neglected and often denied religious aspect of the Roman theater. That the Roman theater had from its beginnings profound religious connections and maintained these as long as it and paganism were a going concern, he demonstrates in a succinct first chapter. Three chapters are devoted to the problems of Roman theater architecture in conjunction with temples and one to the cere-

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monies, especially the *pompa* and *sel-listernium* in which the theater, or parts thereof, functioned as a temple.

Taking the Theater of Pompey in the Campus Martius as keystone of the architectural development, the author collects a sequence of earlier buildings in which a temple or similar edifice is approached by a flight of steps that could function as a cavea. The pattern crystallized in the Theater of Pompey is, he decides, Italic. But the antecedents he adduces, except for the Comitium/Curia complexes of Cosa and Paestum (and Rome?) are not earlier than the Second Punic War, the great divide of Hellenistic architecture in Italy, and axial planning was not, so far as we know, an invention of the Italians, so Italic does not seem the proper term. Nor does any of the buildings offered seem to have been designed to function as a theater, since they are inconvenient of access, without adequate stage buildings, and laid out without consideration of spectators' sight lines. It is much more likely that they are simply impressive architectural approaches designed to emphasize the surprise on entering that

is found in so much great Roman architecture after ca. 150 B.C. Any flight of steps can *serve* as a theater, but it would be a mistake to say that the Spanish Steps (an apt parallel, I think) were *designed* as a theater, however theatrical they may be. Moreover, however splendid the great Hellenistic architecture of central Italy, we should not forget that many if not most of the ideas behind it came from Greece and Magna Graecia. Plutarch (*Pompey* 42.3) tells us that Pompey was so delighted with the theater of Mitylene that he had a model made so that he could build a larger copy in Rome. On the face of things, as Caputo saw, it was more likely the arrangement of temple and theater, the conspicuous innovation in his theater in Rome, that delighted him than anything else, though Mr. Hanson is dubious of this. I have not been to Mitylene to examine the theaters, but it strikes me as odd that no one who writes about the Theater of Pompey seems to have been there either.

In his fourth chapter Mr. Hanson assembles the evidence for the survival of the axial cavea shrine in later

periods. None of the shrines of these later theaters lives up to the splendor of Pompey's Temple of Venus Victrix, but the author has good proof of several, and shows the probability that there were many more. He argues for some twenty scattered throughout the ancient world, though we may doubt in some cases that the comparatively modest architecture warrants supposing all of these to have been cult centers. Still, we must conclude that every Roman theater did have at least a patron divinity, even if not a cavea shrine. The last chapter and the appendix give clues of other ways in which this requirement could be fulfilled.

L. RICHARDSON, JR.

Yale University

THE FACE OF THE ANCIENT ORIENT: A Panorama of Near Eastern Civilizations in Pre-Classical Times, by SABATINO MOSCATI. xvi, 328 pages, 5 figures, 32 plates, 1 map. Quadrangle Books, Chicago 1960 \$6.00

The author undertakes to draw together in a comparative study the

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characteristic features of ancient Oriental civilizations. He makes liberal use of citations from written records, which include the results of recent discoveries. Beginning with the Sumerians and the later civilizations of Mesopotamia, he surveys in order the civilizations of the Egyptians, the Hittites and Hurrians, the Canaanites, Aramaeans and Hebrews, and concludes with a synthesis of cultures under the Persians. The book attempts to present the chief features of each civilization under the headings of historical development, religion, literature and art. The text is well documented with references to sources both ancient and modern.

The volume is not intended for the specialized student, but rather for the more general reader who wishes to obtain an up-to-date view of the ancient world that is synoptic in its scope.

LEROY A. CAMPBELL

Brooklyn College

**ARCHAEOLOGICAL EXCAVATIONS IN YAP**, by E. W. and D. S. GIFFORD. 76 pages, 5 figures, 18 plates, 1 map. University of California Press, Berkeley and Los Angeles 1959 (Anthropological Records, Vol. 18, No. 2) \$1.50

Professor Edward W. Gifford died on May 16, 1959, after a distinguished lifetime of ethnological and archaeological research, much of which was conducted in the Pacific Islands. His wife Delila was his companion and research associate on most of the field trips he undertook. This slim report is a record of their last expedition and completes the documentation of three critical sites which had been chosen for investigation because of their specific importance in understanding the prehistory of outer Oceania. The Giffords completed earlier work in Fiji (1947) and New Caledonia (1952) prior to their four-month study of five Yapese sites in early 1956.

Analysis of the archaeological materials retrieved from Yap indicated a close connection between the prehistory of Yap and of the Mariana Islands to the northeastward. Pottery types and shell adzes were especially comparable. It is probable that Palauan pottery, when reported upon, also will be found similar. The Giffords obtained seven C-14 dates, ranging over a span of 1680 years, the earliest of which is A.D. 176. This early date is not surprising and in time will probably be pushed

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backward. Dates from Saipan (1527 B.C.), Fiji (46 B.C.), and New Caledonia (847 B.C.) all are earlier.

The findings of the expedition are concisely summarized and the many excellent tables will aid readers. Separate analyses are made of site composition, zoological specimens and artifacts (shell, stone, bone and pottery). Brief sections are included which deal with local distributions in space and time and foreign cultural relationships. Interestingly, no great antiquity was found for the famous and unique stone-disk money of Yap.

ROLAND W. FORCE

Chicago Natural History Museum

**HIDDEN AMERICA**, by ROLAND WELLS ROBBINS and EVAN JONES. (xiv), 263, viii pages, 125 illustrations. Alfred A. Knopf, New York 1959 \$5.00

If a corporation erecting a skyscraper should be approached by an enthusiastic fellow with a set of plans under his arm who vowed he just loved engineering and drafting but had no professional training, he would no doubt be sent packing. But such is the innocence or awe with which archaeology is regarded by many businessmen, architects and city planners that an enterprising amateur who makes himself available to excavate for historical remains is sometimes accepted without question.

Unhappily, *Hidden America* does little to dispel this common illusion. Furthermore, such an entertaining book can leave an enthusiastic layman aglow with the prospect of a chance discovery. He will not be inclined to pause and consider objectively his qualifications to handle data which may well perish as soon as he disturbs it. The thought is deliberately fos-

tered: "Well, if Robbins could do it and have so much fun and adventure, why can't I—or anybody?" Why, indeed? For one thing, few amateur diggers in this country have his skill and resourceful inquisitiveness regarding historic source material. They may not see that, although archaeology involves a technique, an archaeologist is more than a technician.

Mr. Robbins, who left high school after his freshman year and set up a successful house-painting and window-washing business in Lincoln, Massachusetts, turned with complete devotion in the 1940's to his hobby of searching for buried historical evidence, and progressively turned it into a full-time occupation. Inquisitiveness, commonsense and enterprise combined with hard work characterized Robbins' digs. "Every spade put into the ground with care helps. Every carefully recorded excavation serves to confirm a standing opinion or to postulate a new one." So says the text. We wish Mr. Robbins had simply said: "Don't try to do any digging by yourself unless you are a trained archaeologist, or are working under the direction of one." But he never goes that far.

A weakness of the book lies in descriptions of the work of professionals. Where Mr. Robbins trips badly is in the very quagmire of scholarly prehistoric research which he had purposefully skirted thus far in his career. He—or is it Mr. Jones?—writes glibly and entertainingly about learned scientists called in just in the nick, after crumbling bones brought from a gravel pit turned out to be many thousands of years old. We are told the Midland, Texas, skull was declared by a "team" of experts including Fred Wendorf, Alex Krieger and T. Dale Stuart, to be that of a "young woman . . . buried by the last glacial advance." The

date: 20,000 years ago! Well, any time the last glacial advance overwhelmed the site of Midland, Texas at any date whatever will be a red letter day. Actually, the story of the "Minnesota Girl" is wed to that of "Midland Man" with ensuing confusion. The "team" will certainly not be obliged to Messrs. Robbins and Jones.

*Hidden America* is a lively and journalistically entertaining book for the uninformed or casually informed layman. Its merit is that it tells of measures now being taken by responsible agencies in the United States to conserve archaeological and historical sites. Its failure is that, while cautioning the layman not to dig recklessly, it also informs him that he, too, can become "an archaeologist" simply by following Mr. Robbins' example and instruction. Never mind the four years' undergraduate plus three years' graduate work and three or four seasons of field experience required of the academic professional. Even when beckoning the amateur to accept responsibility for historic preservation, the authors put it this way: "The National Park Service has a Historic Sites Survey to analyze archaeological poten-

tials, assessing sites in terms of regional, state or local significance—an obvious aid to non-professional diggers." Not the way the Survey intended it, Mr. Robbins!

For this reviewer, who has devoted considerable time and thought to the intelligent use of amateur assistance in professionally directed archaeological field work, the best example has been set by English archaeologists who have used amateur volunteers to excellent effect, while maintaining a high standard of scholarly precision. And, by a happy coincidence, the English amateur is frequently a scholar to begin with.

JOHN L. COTTER

*National Park Service*

**SCIENCE AND CIVILISATION IN CHINA.** Vol. 3, *Mathematics and the Sciences of the Heavens and the Earth*, by JOSEPH NEEDHAM with the collaboration of WANG LING. xlvii, 874 pages, 227 figures, 20 tables. Cambridge University Press, New York 1959 \$27.50

This is the third in a projected series of seven volumes on the history of science in early China. The first two, *Introductory Orientations* and *History of*

*Scientific Thought*, are preliminary to the main topic, and with this one "we reach the ore of the work as a whole, and leave behind all tunnels and adits, all introductory explanation and interpreting."

The purpose of the present volume is to seek out and explain the contributions of traditional Chinese civilization to the sciences of the heavens and earth. Its seven main sections deal with the development of mathematics, astronomy, meteorology, geography and cartography, geology, seismology and mineralogy. About two-thirds of the text are devoted to mathematics and astronomy. Each section is introduced by a review of the early Chinese literature and followed by an investigation of Chinese ideas and contributions in the field under discussion. Parallels or contrasts with early science in the Near East or Europe are adduced whenever possible in order to place the Chinese discipline in a more familiar framework for those not fully acquainted with Chinese studies. For example, the section on quantitative cartography deals with Near Eastern and European as well as with Chinese cartographic history, and thus provides



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*Tetradrachm of Akragas, Sicily, 413-406 B.C. Two eagles standing on dead hare. Reverse: Crab; below, Scylla.*



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a clearer understanding of the subject. And those interested in the Greek geared mechanism resembling an orrery, raised from the sea at Antikythera, upon which so much work has recently been done, will find stimulation in the treatment of the development of astronomical instruments; this section investigates the origin of the gnomon, sundial, clepsydra, armillary sphere and celestial globes.

The results of archaeological work are used in this volume to throw light on early Chinese science. One of the most fruitful sources, the so-called oracle bones, has been fully exploited. The discovery of these bones and the decipherment of the writing on them has proved to be one of the most exciting chapters in Chinese archaeology. These bones had long been used in Chinese medicine, but eventually they were traced to their source in Honan Province, and this resulted in the discovery of the site of the earliest known capital of China. Through accidental finds and systematic excavation there are now about 100,000 of these inscribed bone fragments. This corpus of earliest known Chinese writing, dating from the twelfth century B.C., is an invaluable source of information on Chinese thought, institutions, life and history. Other archaeological materials are also used to advantage, especially in the history of astronomy, but it is unfortunate that the six second-century astronomical bas-reliefs from Nanyang, Honan Province, were overlooked.

This is rather a ponderous work; it is not light reading. For the fields covered it is encyclopedic in nature and as such is highly organized. The work is written in a lucid and semi-technical style that will be easily understood by most readers. These qualities may be expected in a work written by one of England's eminent scientists for those interested in the general history of civilization. It is lavishly illustrated, carefully indexed and documented. Typographically, it is a superb example of the printer's craft.

R. C. RUDOLPH

*University of California  
at Los Angeles*

**MASTERPIECES OF GREEK ART**, by RAYMOND V. SCHODER, S.J. 105 pages, 96 color plates. New York Graphic Society, Greenwich, Connecticut 1960 \$12.50

This is by far the best pictorial presentation of Greek art that has been published. Although many of the objects, especially sculpture and architecture, have lost nearly all their original colors, and color reproductions still leave much to be desired, Father Schoder's book shows the great superiority of color plates over black-and-white pictures. To Greek artists form and color were inseparable elements; we cannot hope to understand their art unless we try to see the objects as their creators saw them. Works of art with little or no color preserved have been made to appear in new and stimulating guise with the aid of skilful

illumination and colored backgrounds.

The explanatory texts will prove helpful to laymen and students who are fortunate enough to make their first acquaintance with Greek art through the plates and pages of this superbly beautiful volume. Not the least attractive feature of the book is the comparatively low price.

OSCAR BRONEER

*Ancient Corinth, Greece*

**MYTH AND RITUAL IN THE ANCIENT NEAR EAST**, by E. O. JAMES. 352 pages, 1 map, 1 chart. Frederick A. Praeger, New York 1958 \$6.00

Professor James, whose output of books dealing with religion from the modern standpoint of anthropology and archaeology shows no signs of abating, has offered in this book a kind of companion volume to his well known *Christian Myth and Ritual*. Since he has followed an orderly topical arrangement, and has provided abundant references and a good bibliography, the book is well adapted for classroom use.

The geographical coverage of the work includes "the entire region from the Persian Gulf and beyond the Caspian Sea to the Aegean, Crete and North Africa." The temporal coverage is the whole pre-Christian period back into the Old Stone Age.

The author was not concerned with the defence of new theses or with the publication of new materials on which to build them; in writing the book he kept foremost in mind something which is often more difficult, the organized exposition of the present state of knowledge. He has dealt with his subject in eight chapters (The Emergence of Myth and Ritual, The Seasonal Cult Drama, The Sacred Kingship, The Mother-Goddess and the Sacred Marriage, The Myth and Ritual of Creation, Good and Evil in the Sacred Combat, Eschatological Mythology, The Aetiological Myth and the Saga) followed by a very pertinent ninth chapter which deals with the meaning of myth and the function of ritual.

Looked at through editorial eyes, it must be admitted that the book is occasionally marred by wordiness, anacoluthons and sentences so constructed as to be almost unintelligible. There are also a few unexpected inaccuracies; for example, one which is appalling

to an Iraqi *pro tempore* is the appearance of Erech and Uruk as two far apart places on the map at the beginning of the volume. The reader cannot but suspect the book was not properly edited. An author, otherwise mentally engaged, needs help in these matters. At all events, these flaws do not prevent the book, which reveals the great learning and experience of Professor James on every page, from being an excellent introduction for the beginner and a quickening recapitulation for the initiate.

JOHN SHAPLEY

University of Baghdad

ARCHAEOLOGISCHE UNTERSUCHUNGEN IN SUEOOST-COSTA RICA, by WOLFGANG HABERLAND. xii, 82 pages, 3 figures (map and plans), 27 plates, 3 tables. Franz Steiner Verlag, Wiesbaden 1959 (Acta Humboldtiana: Series Geographica et Ethnographica, No. 1) DM 18

The *Acta Humboldtiana* represents a new venture of the German Ibero-American Society whose previous publications consisted only of large and expensive volumes. This new series

will be composed of smaller publications written in German, Spanish or Portuguese. It is a fitting tribute to the famous German scientist, Baron Alexander von Humboldt, that this first volume of the series bearing his name appeared on the hundredth anniversary of his death, May 6, 1959.

Volume I presents the results of excavations conducted in southeastern Costa Rica during 1955. Two sites were excavated, one near the town of Buenos Aires in the Valle del General, the other at Finca Aguas Buenas, near Cañas Gordas, on the border of Costa Rica and Panama. The first was a burial site, where twenty-eight tombs were uncovered. The earthen walled tombs were covered with large flat stone slabs. The pottery represents a different culture from that of the classic Chiriquí and apparently it has no connection with any previously known culture. It was named the Boruca culture.

The second site was a habitation; here very few complete vessels were found. Nevertheless, sufficient material was uncovered to establish still another culture, named Aguas Buenas, which appeared to be older than either the

classic Chiriquí or the Boruca cultures. As a matter of fact, it would seem that Haberland has uncovered the earliest culture thus far known in southeastern Costa Rica.

STEPHAN F. BORHEGYI

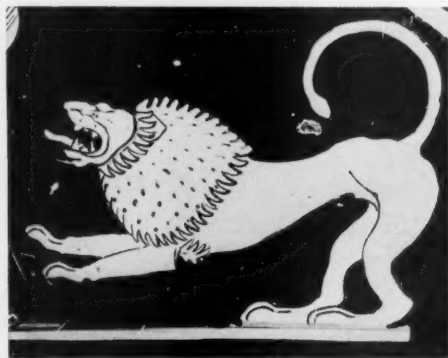
Milwaukee Public Museum

CIVITAS MACTARITANA, by GILBERT CHARLES PICARD. 156 pages, 15 figures, 45 plates, map. E. De Boccard, Paris 1958 (*Karthago*, VIII, 1957)

Mactar, in the heart of Tunisia, was the southernmost town of Massinissa's Numidian kingdom. Its extensive ruins early established its identity, but systematic excavations were not undertaken until 1944. This volume, first of a two-part study of Mactar through its Christian existence, traces its development from a Libyo-Punic market-town to a Roman colony. M. Picard, formerly Director of Antiquities in Tunisia, skilfully weaves the monuments into a discussion of the town's political, economic, social, religious and artistic institutions.

Nurtured by a Numidian aristocracy and a Punic bourgeoisie, native traditions were preserved throughout the first century of our era. Of the Numid-

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ian period only funeral structures remain—dolmens and chambered megaliths. More recalls the Punic town: cemeteries, a *tophet* to Ba'al Hammon (an open-air sanctuary containing sacrificial ex-votos), a forum, evidences of temples of Hathor Miskar and Liber Pater. No Punic superstructures have survived, but rather their second- and third-century reconstructions, and the Roman architectural sculpture in what Picard calls the "African baroque" style contrasts with the distinctively native commemorative and funerary stelae of the first and second centuries.

By A.D. 180 Mactar was completely Romanized, a transformation partly effected by the *collegia juventutis*, a kind of local militia. In 88 this youth organization had erected a basilican meeting place and two *horrea* (warehouses), but the surviving complex of porticoed courtyard surrounded by clubrooms, cult chamber and three-aisled basilica reflects a third-century rebuilding. In 290 the aisles were eliminated and an apse added, so that in the fourth century it was easily converted to Christian use.

Beside the *Basilica Juvenum* is a fourth-century structure, perhaps the successor to one of the *horrea*. This four-lobed construction, containing stone troughs, adds one more member to that curious African family of "édifices à auges." These buildings, of varied architectural types, have long deserved re-evaluation. Picard suggests that they were *horrea* for collecting, measuring (hence the troughs) and storing grains and other comestibles.

Although a few architectural details such as low vaulted aisles and awkward entrances are still unexplained, this theory is the most credible yet proposed.

With Picard's unique knowledge of North African archaeology and ancient African cults, he has produced not just another report but a penetrating portrait of early Mactar. We are indebted to the Mission Archéologique Française which, through *Karthago*, keeps us well informed of developments in Tunisia.

MARGARET A. ALEXANDER

*State College, Pennsylvania*

**GREEK PAINTED POTTERY**, by R. M. COOK. xxiii, 391 pages, 44 figures, 56 plates. Quadrangle Books, Chicago 1960 \$12.50

This book is one of a series of "Handbooks of Archaeology," and its main purpose is to give practical information. "Greek Painted Pottery" is not the same thing as "Greek Vase Painting" and this is not primarily a book of art criticism. It tries to teach the reader to identify, by date and place of manufacture, the principal Greek fabrics, to recognize and name the different shapes of vases, and to understand something of the technique of ancient potters and of modern restorers.

The first seven chapters introduce the subject and survey the periods from Protogeometric to Hellenistic. The general development during each

period is first described, and then separate sections are devoted to the more important fabrics. The essential factual information is thus easily found, and is clearly and accurately set out, but the system does not lend itself to easy and enjoyable continuous reading. Moreover, though the great names are there, with the more important facts about each, the mass of mediocre work has not been put aside to make space for discussion of the masterpieces. Again and again whole classes of pottery are introduced to the reader, only to be dismissed after a paragraph or two as "trivial and bungling" or "clumsy and dispirited." This is all very well when a class is being shown round a large collection of mediocre quality. The student is excited by direct contact with antiquity; there is little danger of his losing interest, and he must be reminded that the passage of twenty-five centuries does not of itself ennoble a piece of routine hackwork. Books must be used to show him as much as possible of the quality of the masterpieces. Mr. Cook's own illustrations—plentiful and good, though often familiar—present fine pieces of each class, not the commercial pottery that takes up too much of his text.

In many of the later sections the author seems to be aware that he is trying to teach what cannot be taught through books—for example, the distinction between local clays, the detection of modern restorations and the proper handling of museum specimens. Mr. Cook writes clearly and sensibly on these subjects, and on taking notes, drawing and photography, cleaning, mending and even collecting. But "Practical Comments" are no substitute for practice.

Chapters VIII-XIII deal briefly with shapes (more drawings wanted), techniques, inscriptions, chronology (admirable: clear, concise and up-to-date), "The Pottery Industry," and "Uses for Other Studies" (brief and pessimistic). Chapter XV ("The History of the Study of Vase Painting") presents a mass of interesting facts in a small compass.

The book is well produced, with an index and a good bibliography. But the beginner should learn to enjoy Greek vase painting before tackling Mr. Cook.

J. K. ANDERSON

*University of California, Berkeley*



## BRIEF NOTICES

**EXCAVATIONS AT THE LoDaisKa SITE IN THE DENVER, COLORADO, AREA**, by H. J. and C. C. IRWIN. viii, 156 pages, 76 figures, 8 tables. Denver Museum of Natural History, Denver 1959 (Proceedings, No. 8) \$2.50

A report on the excavation of a rock shelter at the head of the Platte River in northeast central Colorado which was discovered by Mrs. LoDaisKa Bethel. A full and well illustrated report on the typology of the artifacts takes up a large part of the publication, and is followed by reports on the geology, analysis of the soils, faunal remains, plant remains, and fossil pollen and spores, each by a different expert. The cultures of the recent neighboring Ute and Pawnee are then outlined. Four sequent culture complexes are distinguished, the latest, with ceramics, believed to be related to the Fremont culture of western Colorado and eastern Utah. The next, also ceramic and agricultural, seems to be a manifestation of the Woodland Culture. The third seems to have been a hunting and gathering

culture, most closely resembling those of the McKean site and Signal Butte I. The earliest is a manifestation of the Desert Culture. Radiocarbon dates had not yet been received.

**THE LAPPS**, by ROBERTO BOSI. 220 pages, 55 figures, 29 plates. Frederick A. Praeger, New York 1960 (Ancient Peoples and Places, 17) \$6.50

A delightfully readable and scholarly account of the origin and history, religious beliefs and mode of life of the Lapps, the peace-loving, mysterious people of northern Scandinavia, "most ancient extant race in Europe."

**FOOTE CANYON PUEBLO**, Eastern Arizona, by JOHN B. RINALDO. 150 pages, 62 figures, 3 tables. Chicago Natural History Museum, Chicago 1959 (Fieldiana: Anthropology, Vol. 49, No. 2) \$4.00

The latest in this museum's large series of excavation reports on the Mogollon region of the upper Gila River in southeastern Arizona and southwestern New Mexico. This masonry Pueblo ruin seems to be of the last period, about A.D. 1250-1350, when it was apparently abandoned. It

is of especial interest as forming a link between the Cochise and Mogollon cultures on one hand and the historic Western Pueblo cultures on the other. The architecture is well described, but the greater part of the report is devoted to the pottery and the stone, bone and copper artifacts.

**ARCHAIC HUNTERS OF THE UPPER OHIO VALLEY**, by DON W. DRAGOO. 107 pages, 35 figures, 3 tables. University of Pittsburgh Press, Pittsburgh 1959 (Carnegie Museum, Anthropological Series, No. 3; reprint from The Annals of Carnegie Museum, Vol. 35) \$4.00

The report begins with a full account of the excavation of two rock shelters on the Cheat River in West Virginia, the Dixon and the Rohr. The artifacts are well described and illustrated. The relationship of these two sites with others in the Upper Ohio Valley Archaic is then considered, and stone and bone artifacts from the Shriver, Steubenville, Globe Hill and McKees Rocks sites are compared. Going farther afield, the entire Archaic from New York to Tennessee and Wisconsin is taken up, with especial

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Inquiries concerning admission and scholarships should be addressed before January 15 to the Chairman of the Committee on Admissions and Fellowships: Professor Gertrude Smith, Department of Classics, University of Chicago, 1050 East 59th Street, Chicago 37, Illinois.

attention to the McCain site in Indiana. An excellent analysis of Laurentian "Archaic Manifestations of Eastern North America" closes the study. The author believes that the Laurentian did not develop from the Paleo-Indian cultures but was a later migration from Alaska or Asia.

**ARCHAEOLOGICAL SURVEY OF THE KNOSSES AREA**, compiled by M. S. F. HOOD. 24 pages, 3 figures, 1 map. British School at Athens, London 1958 17s.6d.

An index to all the antiquities found in the Knossos area, together with references to publications of them or sources of information about them. There are three sections—Minoan Knossos, Geometric and Archaic Knossos and Greek and Roman Knossos—with a map for each and a brief text discussing the nature of the remains in each period. A large folding map has all the monuments numbered, roughly from north to south and from west to east; the index lists the monuments by these numbers and gives for each brief indications such as circumstances of finding and present condition, as well as bibliography.

**ATLAS OF THE CLASSICAL WORLD**, edited by A.A.M. VAN DER HEYDEN and H. H. SCULLARD. 222 pages, 475 figures, 73 maps. Thomas Nelson and Sons, New York 1960 \$15.00

Both more and less than its title implies, this attractive compendium of Greek and Roman history and civilization might better have been called by a name other than "atlas." Not a reference work in the complete sense, it in-

cludes excellent, clear maps and many magnificent photographs. The text (marred by some misspellings) and the extensive index complete the volume—a handsome possession for anyone interested in the Classical world.

**THE ARCHEOLOGY OF COASTAL NORTH CAROLINA**, by WILLIAM G. HAAG. xii, 136 pages, frontispiece, 16 figures, 5 tables. Louisiana State University Press, Baton Rouge 1958 (Louisiana State University Studies, Coastal Studies Series No. 2)

A good, thorough report on a small and little known region. All the known sites on the coastal islands and the mainland are located and the archaeological aspects described; sites are especially thick on the Pamlico River. The large half-tones show the artifacts, mainly the pottery, very well. The aboriginal cultures of the Early Period, transitional Middle Period, Protohistoric and Historic Periods are outlined. The report puts this *terra incognita* on the archaeological map.

**EXCAVATIONS ON DEFENCE SITES 1939-1945**. I. Mainly Neolithic-Bronze Age, by W. F. GRIMES, with contributions by various others. xv, 259 pages, 102 figures, 48 plates. Her Majesty's Stationery Office, London 1960 (Archaeological Reports, No. 3) £4 4s.

During the Second World War a great deal of salvage archaeology was carried out on sites threatened by destruction. The work at the long barrow and the round barrows of Burn Grounds, Hamnett, the Henge monument and burial rings at Stanton

Harcourt, and other such sites, has produced a detailed record of the archaeological remains. Subsequent volumes will deal with salvage work on Iron Age and mediaeval sites.

These paperback reprints, which have recently appeared, are not only worth rereading but useful to keep for reference:

**ARCHAEOLOGY AND SOCIETY**, by GRAHAME CLARK. 272 pages, 52 figures, 24 plates, frontispiece, map. Barnes and Noble, New York 1960 (University Paperbacks) \$1.95

**BIBLICAL ARCHAEOLOGY**, by G. ERNEST WRIGHT. Abridged Edition. xii, 198 pages. Westminster Press, Philadelphia 1960 \$1.65

**THE GREEK COMMONWEALTH: Politics and Economics in Fifth-century Athens**, by ALFRED ZIMMERN. Fifth Edition. 471 pages, 3 maps, Oxford University Press, New York 1961 (Oxford Paperbacks) \$2.50

**BYZANTIUM: An Introduction to East Roman Civilizations**, edited by NORMAN H. BAYNES and H. ST. L. B. MOSS. xxxi, 436 pages, 48 plates, 3 maps. Clarendon Press, Oxford (Oxford University Press, New York) 1961 \$2.25

**VITRUVIUS: The Ten Books on Architecture**, translated by MORRIS HICKY MORGAN. xiii, 331 pages, 60 illustrations. Dover Publications, New York 1960 \$2.00

**ROME**, by M. ROSTOVITZEFF. xiv, 347 pages, 3 figures, 23 plates, 2 maps. Oxford University Press, New York 1960 (Galaxy Book) \$2.25



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Number X in the series of monographs on Archaeology and Fine Arts sponsored by the Archaeological Institute of America, published with the aid of grants from that body and from the Australian Humanities Research Council.

This monograph is the first part of a larger study of Apulian red-figured pottery, which the authors hope will eventually cover the whole of that fabric. They have divided Apulian red-figure vases on stylistic grounds into two main groups, "Plain" and "Ornate," and the present volume attempts to classify the vases of the

"Plain" style from the later 5th century to about the middle of the 4th century B.C. It deals with some fifty vase-painters and about 800 vases, many of which are illustrated for the first time. A volume on the work of Apulian artists of the "Ornate" style will eventually follow.

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